REPORT RESUMES

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HOW PEOPLE PAY FOR COLLEGE.
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THE OBJECTIVES WERE TO DETERMINE WHAT PROPORTION OF PARENTS CONTRIBUTE TO THE COLLEGE EDUCATION EXPENSES OF THEIR CHILDREN, THE AMOUNT THEY CONTRIBUTE, AND HOW CONTRIBUTING PARENTS BUDGET AND PLAN FOR THE EDUCATION OF THEIR CHILDREN. OVER 2,700 INTERVIEWS WERE TAKEN IN 2 SURVEYS IN 1959-60. THE INTERVIEWS OBTAINED INFORMATION ON THE AMOUNT PARENTS CONTRIBUTED TO THE EXPENSES OF THEIR CHILDREN WHILE IN COLLEGE, FUNDS ACCUMULATED PRIOR TO ENROLLMENT OF THE STUDENTS, FUNDS ACQUIRED DURING THE PERIOD OF ENROLLMENT, AND OTHER PERTINENT INFORMATION. PARENTS OF PROSPECTIVE COLLEGE STUDENTS WERE ASKED QUESTIONS CONCERNING PLANS FOR SENDING AND FINANCING THEIR CHILDREN THROUGH COLLEGE. MEDIANS, MEANS, AND FREQUENCY DISTRIBUTION ON THE FINANCIAL VARIABLES AND SAMPLE DISTRIBUTIONS ON REPLIES TO OTHER QUESTIONS WERE PRESENTED. MULTIPLE REGRESSION TECHNIQUES WERE USED TO ANALYZE EXPECTED AND ACTUAL COLLEGE ATTENDANCE. OF THE TOTAL ANNUAL EXPENSES OF COLLEGE STUDENTS IN 1959, 60 PERCENT WERE MET FROM MONEY CONTRIBUTED BY THEIR PARENTS. OF THE AVERAGE TOTAL OF $1,550, ABOUT $960 CAME FROM THE PARENTS, THE REMAINDER COMING FROM MONEY EARNED BY THE STUDENT, STUDENT SCHOLARSHIPS, AND OTHER SOURCES. HALF OF THE FAMILIES INTERVIEWED WERE ABLE TO DRAW UPON MONEY SET ASIDE IN ADVANCE TO HELP PAY FOR THE EDUCATION OF THEIR CHILDREN. IN ONE FAMILY OUT OF FIVE, THE MOTHER TOOK A JOB TO HELP PAY COLLEGE BILLS. FORTY-FOUR PERCENT OF THE FAMILIES PAID OUT OF CURRENT INCOME. (GC)

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HOW PEOPLE PAY FOR COLLEGE

By

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The Research reported herein was performed pursuant to a contract with the United States Office of Education, Department of Health, Education and Welfare.

September 1960

Survey Research Center
Institute for Social Research
The University of Michigan

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Preface

In 1959-1960 the Survey Research Center of The University of Michigan undertook a study of expenses borne by parents for the higher education of their children. This research was made possible by funds received from the Office of Education of the Department of Health, Education, and Welfare. This monograph constitutes a report on that research.

Purposes of the Research

This research was undertaken to learn more about how higher education is paid for. It is concerned with one of the major sources of funds----parents who pay or help pay for the education of their own children. A primary purpose has been to discover how far in advance parents begin to plan for a college education for their children and how they raise the money to pay for it.

It is hoped that results of this inquiry will contribute helpfully both to the discussion of how many children are to receive a higher education in the coming years and to the associated question of how that education is to be financed. This research is not intended to provide answers to the broad problems of public policy in this area. Such answers depend on information and considerations which go beyond anything which is discussed here. It is hoped, however, that the information gathered here may be of assistance in deliberation of the issues now arising in the minds of those concerned with planning the future of higher education. Some of it, likewise, may assist parents in making their private plans for the education of their own children.

In order to understand costs to parents for higher education, it is necessary to explore the framework within which these contributions are made. Something must be known about the total cost of attending college and the relative importance of parental contributions and of other sources of funds in meeting that cost. The first section of this report, therefore, is devoted to the total cost of attending college.

Study of the costs of higher education borne by parents divides naturally into two topics: first, the actual outlays made by parents who have had children in college in recent years or who have children in college at the present time; and, second, the plans for financing college made by parents whose children may attend but have not yet matriculated. It is particularly interesting to compare the actual methods of financing used in recent years with the financing plans being made by people whose children are still to enter college.

Plans for financing higher education cannot be investigated without finding out which parents in the population expect their children to attend college. A section of the analysis, therefore, is devoted to how many and which people expect their children to enter college, and some attempt is made to assess the realism of these plans. For this purpose, plans for the future education of children are compared with the known experience of families whose children have completed their education.

The Sample

The data on which the present report is based were collected as a part of two surveys undertaken by the Economic Behavior Program of the Survey Research Center. In October and November of 1959 interviews were taken with members of 1342 family units chosen in such a manner that they constituted a probability sample of the population of the United States living in private dwelling units. Of all family units designated for interview in this survey, about 85 percent were in fact successfully interviewed. The designated respondent in half of the interviews was the head of the family, and in half, the wife of the head.

An additional 1407 family units were interviewed on a similar basis as a part of the survey undertaken in May and June of 1960. Again, of the family units designated for interview, 85 percent were interviewed successfully. Thus, a total of 2749 interviews were taken in the two surveys.

Since the number of families who actually have a child in college at any given date is small relative to the total number of families in the population, a special supplemental sample was included in the survey in May and June of 1960. This sample was obtained from a survey of Patterns of Family Change. Questions about the educational status of the children in the family had been asked in this survey which included about 2700 interviews with a cross-section sample of all spending units in the United States. This project was financed by a grant from the Ford Foundation. All families in this survey reporting that they had one or more children in college at the time of interview in March or April 1960 were re-interviewed shortly thereafter in connection with the special supplemental interviews just described above. A total of 100 interviews were taken with these families and information from these interviews appears where appropriate in the tables of this report. The authors wish to acknowledge gratefully their indebtedness to the staff of that project for permitting them to make use of these addresses.

Acknowledgements

This study was carried out by the staff of the Survey Research Center, a division of the Institute for Social Research of The University of Michigan. The Institute is under the direction of Rensis Likert, while Angus Campbell is director of the Center. The study was carried out in the Economic Behavior Program of the Center, George Katona, Director. During the period of study the Center's field staff was under the direction of Morris Axelrod and Charles Cannell. The Sampling Section was directed by Leslie Kish, assisted by Irene Hess. Study design, analysis, and report writing were the responsibility of John B. Lansing, with the assistance of Thomas Lorimer and Chikashi Moriguchi. The regression equations presented in this report were calculated by Moriguchi, except for the two equations involving nine and ten independent variables, which were calculated on the I.B.M. 704. Grace Beardsley edited the manuscript. The typing for photographic reproduction was done by Beverly Bater.

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I. Summary and Conclusions

The Cost of Attending College in 1959-1960

Annual cost of college: The average annual expenses of unmarried college students in 1959-1960 were about $1550 per year. There was wide variation from student to student in total annual expense depending on whether the student attended full-time or part-time, whether he lived at home or at college, whether he attended a publicly or privately supported institution, and whether he attended a junior college, a college offering a bachelor's degree, or a university.

Main sources of funds: Of the total annual expenses of college students, roughly 60 percent on the average is met from money contributed by their parents. Of the average total for single students of $1550, about $950 came from parents, $360 from money earned by the student, $130 from scholarships, and $110 from other sources. These estimates, however, are approximate and conceal much variation from student to student. For example, 2 percent of single students receive $3000 a year or more from their parents.

Raising the Parental Contribution

Factors influencing the amount raised: The amount of money which parents contribute annually toward the education of a particular student depends on the family's income and on the number of other children in the family to be educated. It also depends on the educational attainment of the parents. Those parents who themselves were better educated tend to spend more money per year on the college education of their children while in college, presumably in order to provide for the children a college education of high quality.

Methods used to raise the money: Half of the families who have had children in college in the last five years were able to draw on money set aside in advance to help pay for the education of their children. In about one family out of five the mother took a job to help pay college bills. Forty-four percent of families reported that they paid for the education of their children out of current income by reducing other expenditures, or by living on a tight budget. Some contribution out of current income presumably was made by other families.

Other methods of raising the money are mentioned by fewer parents but might be of great importance for those families. Some families, of course, raised money in several ways. It was less usual for the father to take on extra work than the mother, but in 8 percent of families he did so. Eight percent of the families received a gift or inheritance. The family borrowed money to help pay for the education of 8 percent of the students. About 13 percent of unmarried students received no financial assistance from their families.

Measures of feelings of financial strain: About half of all families who have had children in college in the last five years feel that the financial help which they have given to their children has been as much as was needed. About two out of ten seem to have no clear feeling on this point. In about three families out of ten, however, the parents feel their contribution "could have been more".

The other side of the same problem is that about four families out of ten report that they found it difficult to meet the cost of educating the children. About two families out of ten report both that they found it difficult to finance the children's education and that they felt their financial help was inadequate. These students and their parents found that paying for college was not an easy matter.

Families in the lower income group were more likely than those in the upper income group to report financial hardship in this sense. But even of those families with incomes of $10,000 or over in 1959 and a child in college, about one out of ten reports financial strain. Of families with only one child, one out of ten reports financial strain, while of the families with five or more children, four out of ten report both that they found it difficult to meet the cost of educating the children and that they felt their help was inadequate.

Peoples' Plans for Financing College for Their Children

Saving now to finance education in the future: About half of all families with one or more children who may attend college report that they have money set aside which can be used to finance their education, since there is a tendency for parents to expect every child to go to college; this finding is probably an underestimate for those families whose children actually will attend college.

There is evidence of an increase in the proportion of families who are saving for college in the form of endowment insurance. Of families who have had a child in college recently, about 12 percent had endowment insurance. Of families where the oldest child is seven to twelve and is expected to attend college, 32 percent have endowment insurance.

Other financial planning: In about one family out of five the mother expects to go to work to help pay for the college education of the children. Parents commonly expect that their children will earn roughly a fifth of the cost of their own education. Very few families expect to borrow money and in very few families does the father plan in advance to do extra work.

Level of Education Attained or Planned for Different Cohorts

Educational attainment of those 25 to 29: In a multivariate analysis of the number of years of formal education attained by those now aged 25 to 29, the educational level of the parents proved to be of major importance. The income of the family while the children were being educated also seems to be important, and there seems to be some tendency for the oldest child to receive more education than the others in the family.

There is evidence of differences between the white and non-white populations both in the level of education attained and in the power of demographic variables in explaining that level of attainment. The socio-economic variables studied seem to be better predictors for negroes than for whites.

Further analysis shows that the level of education attained also depends on the region of the country. The level attained seems to be lower in the South than elsewhere. Finally, the level attained is influenced by whether there is any institution of higher education in the county and whether there is a publicly supported institution of higher education.

Expected level of education: Analysis of the expectations of parents for the education of children now in high school shows that these expectations depend on the academic performance of the child, the sex of the child, the current family income, and the educational level of the parents. Each of these variables is important even when the others are taken into account. As with educational attainment, educational expectations are the result of a complex of social and economic forces each of which is important but none of which is diagnostic alone.

II. The Cost of Attending College in 1959-1960

To understand the financial problem facing parents whose children attend college, it is first necessary to investigate the amount of money which the students and their parents must raise. Actually the total cost of higher education is, of course, larger than that which is raised by the students and their families. This research, however, looks at the cost of education from the point of view of the student and his family.

The first part of this chapter is concerned with the annual cost of college as reported by parents. The second part is concerned with the sources of funds to meet this total cost. A division of sources is made into scholarships, students' earnings, and parents' contributions, plus other miscellaneous sources of funds.

A. The Annual Cost of College

Estimates of the cost of attending particular institutions of higher education are freely available from the institutions themselves. Estimates based on interviews or on data collected from a cross-section of all students enrolled in institutions of higher education in the country, however, are less easily available. The most extensive study of these costs was undertaken under the auspicies of the U.S. Department of Health, Education, and Welfare several years ago, and reports details on what it cost undergraduate students to attend college in 1952-1953.[1] The best estimate of mean total current expenditure per student from this report was $1385. This estimate is not exactly comparable to those presented below since it is restricted to members of the undergraduate population. Estimates in this report refer to students at any level now attending a college or university.

Information was obtained in this study about the total annual expenses of 242 college students. This sample is large enough to permit an estimate of mean expenditure per student per year, although allowance must be made for some sampling error in the results.

The data obtained in the present study were based on answers to the following questions which were asked about each child now in college:

E7. About how much does it cost per year for his education counting tuition, fees, books, room and board, transportation, and everything else? Total Cost: $________

E8. Of that amount, how much comes--(a) from scholarships: (b) from his own earnings? (c) from you as his parents? (d) from other sources. (What sources?)__________________.

a) Scholarships $________
b) Students' earnings $________
c) Parents' contributions $________
d) Other $________

---

[1] Costs of Attending College, a Study of Student Expenditures and Sources of Income, by Ernest V. Hollis and associates.

In analyzing the answers to these questions, the investigators discovered that the replies of the parents of married students seemed to have a very different character from those of the parents of unmarried students. The above questions were designed primarily with unmarried students in mind, and proved to be less than perfectly adapted to obtaining data about married students. The proportion of married students enrolled in colleges, however, is now substantial.

It has been estimated by the Census Bureau that there were 3,340,000 students enrolled in college in October 1959. This estimate includes part-time as well as full-time students and those attending any institution where they are studying toward a regular academic diploma or degree, whether they attend by day or by night. Of these individuals, the Census estimates that 24.5 percent are married. This proportion is, of course, higher among those students in the older age groups than those who have just entered college. Of the 818,000, 68 percent were aged 25 years or older. Since living expenses must be taken into account, the cost of education per year for a married student necessarily presents a very different picture from the cost per year for a single student who is living in a dormitory. If one partner of a married couple is attending college, the other may or may not be employed, and the income and expenses of the couple will reflect that situation.

It must also be remembered that only those students whose parents are alive are covered in this study. Older students are more likely to be married and less likely to have living parents.

Complete information about finances was obtained only for a very small group of married students. It may be sufficient to note that for the 10 married students for whom information seemed complete mean income per year averaged $4200 with a standard deviation of $1700. Presumably these students spent all or nearly all of their income. In other words the expenses of married college students are high and vary widely depending upon their situation.

For the reasons just noted, attention is restricted in the following analysis to unmarried college students. For such students the distribution of total annual expense of attending college is shown in Table 1. The mean total expense shown there is $1550, while the median is $1600. These estimates are somewhat higher than those obtained for all undergraduates in the study of 1952-1953. The difference might be expected in view of the inflation which has taken place in the intervening years.

The distribution shown in Table 1 shows wide variation in total expense from one student to another, which is reflected in the standard deviation of the distribution, $780. The extent of variation reflects the fact that all unmarried students now in college are included and the situations of these students may

TABLE 1: Distribution of Total Annual Expense of Attending College for Unmarried College Students
(percentage distribution of students now in college)

Dollars	Percent
Under 450	6
450 - 949	8
950 - 1449	28
1450 - 1949	31
1950 - 2449	16
2450 - 2949	5
2950 - 3449	4
3450 and over	2
Total	100
Number of students	(232)
Mean	$1550
Standard deviation	$780
Median	$1600

be dissimilar. The distribution of annual expenses is also shown in Graph 1. [1]

In order to indicate the relation between different aspects of the situation of the student and total expenses per year for unmarried college students, a multiple regression equation has been prepared. In formulating the relationship to be tried out in the calculations for this regression equation, it was predicted that total expenses would depend on: first, whether the student was full-time or part-time; second, whether he lived at home or at college; third, whether the institution was publicly or privately supported; and fourth, whether the institution was a junior college, one which offered a bachelor's degree, or a university offering the Ph.D. The variables actually used are defined more exactly in Table 2. As shown in that table, the dependent variable, total expense (Y), is simply the reported expense in dollars. The first independent variable (X_1) refers to whether the student is part-time or full-time. In the calculations X_1 was given the value of 0 if the student is part-time or 1 if he is full-time. The remaining independent variables are of the same type.

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[1] In this graph the intervals shown are defined with limits placed, not at an even hundred dollars, but at the mid-point of a hundred dollar range. This procedure has the advantage that respondents who give an answer rounded to the nearest hundred dollars are less likely to be misclassified.

Total Annual Expenses of Unmarried College Students 1

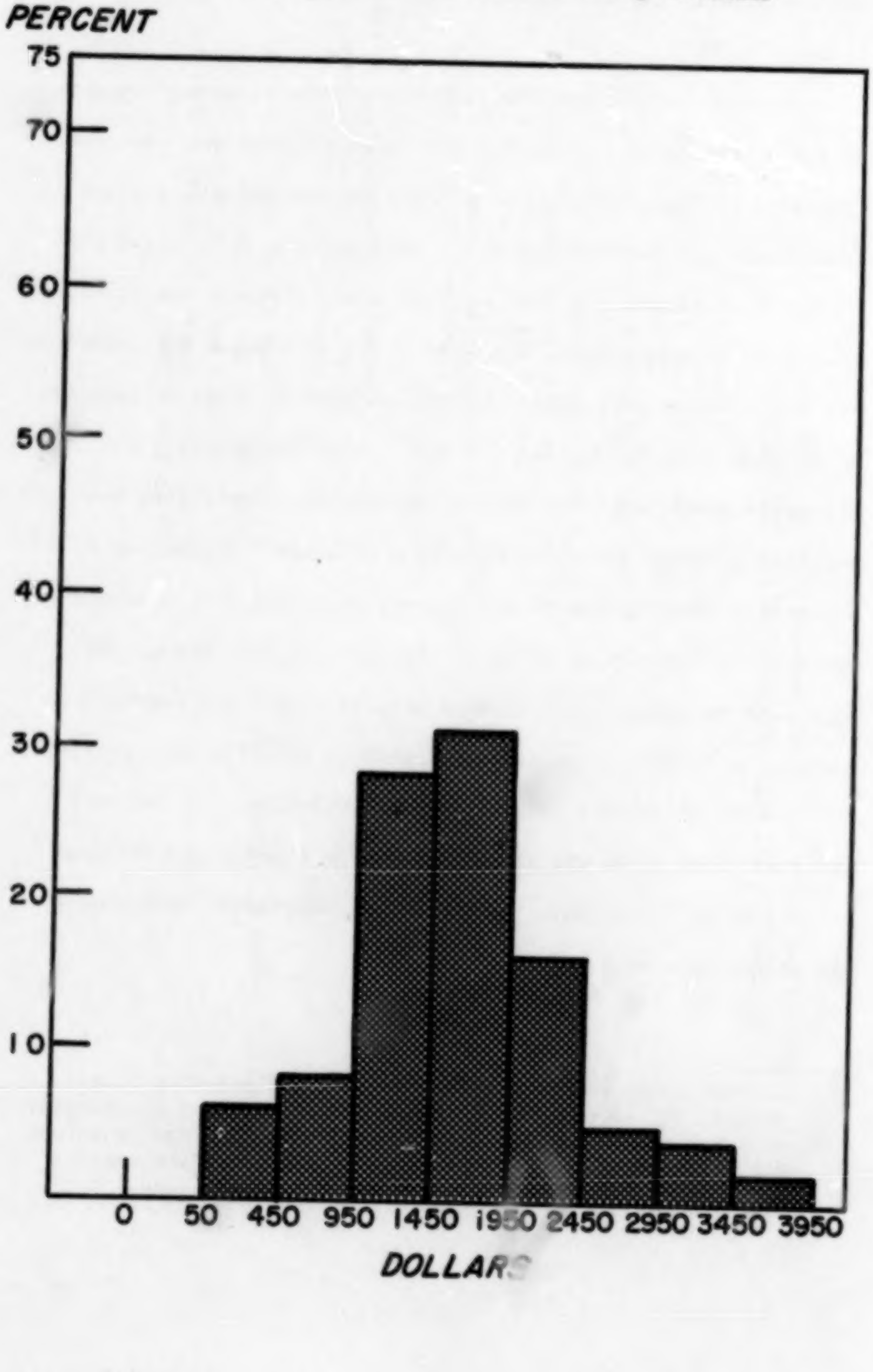


TABLE 2: Definition of Variables for Regression Analysis of Total Expenses per Year for Unmarried College Students

Variable	Symbol	Range of Values
Total expense	Y	Reported expense in dollars
Full-time or part-time	X_1	0 if the student is part-time 1 if full-time (also includes don't know and not ascertained)
Living at home or at college	X_2	0 if the student lives at home (also includes don't know and not ascertained) 1 if at college
Support	X_3	0 if the institution is city-supported or state-supported (also includes not ascertained) 1 if privately supported
Highest level of training offered	X_4	0 if junior college (2 but less than 4 years); also includes not ascertained 1 if offers only bachelor's degree, first professional degree, or master's degree 2 if Ph.D is offered

The results of the calculations, based on 197 cases, were as follows:

(Regression #1)

$$\underset{(200)}{Y = 79} + \underset{(170)}{550\ X_1} + \underset{(100)}{420\ X_2} + \underset{(90)}{300\ X_3} + \underset{(70)}{430\ X_4}$$

In this calculation the multiple regression coefficient was 0.52.

The meaning of these results may perhaps best be understood by some illustrative calculations for hypothetical examples. Four such examples are shown in Table 3. For these examples, values of the independent variables are assumed and the total expense which would be estimated from the equation is shown. Consider Example 1. This hypothetical student studies full-time, lives at home, and attends a publicly supported institution which offers only the bachelor's degree. The estimated total expense for such a student from the equation is \$1060. Example 3 shows that the estimate for a similar student who attends a similar institution and lives at home but attends only part-time would be \$510. On the other hand, the second example shows that for a student who attends full-time, lives at college, and has chosen a publicly supported institution which offers a Ph.D, the estimated total cost would be \$1910. The estimates for these examples are subject to error. This error arises partly from the actual variations from student to student and partly from the limited size of the sample. The last column in the table indicates the standard error of each estimate. As may be seen

TABLE 3: Total Expense Estimated from Regression #1 for Illustrative Values of the Independent Variables

	Full or Part-time Student X_1	Live at Home or at College X_2	Publicly or Privately Supported College X_3	Highest Degree Offered X_4	Estimated Total Expense Y	Standard Error of Estimated Total Expense
Example 1	full-time	at home	public	BA or MA	$1060	$640
Example 2	full-time	at college	public	Ph.D	1910	650
Example 3	part-time	at home	public	M.A.	510	680
Example 4	full-time	at college	private	B.A.	1780	640

from the table, these errors are substantial. In other words the estimate for each example must be regarded as a rough approximation.

Another way to understand the meaning of the results of the regression equation is illustrated in Table 4. This table presents the estimated contribution of each of the independent variables to the estimated total cost. It is the basis for the examples shown in Table 3. The numbers in the column headed "Contribution to Estimate of Y" in Table 4 are simply the product of the different values of the various independent variables times the coefficient shown in the estimating equation. Consider Example 1 from Table 3. Since this hypothetical student is full-time, the value of X_1 is 1 and the contribution to the estimate of total expenses is plus $550. He lives at home, hence, there is no addition to the estimate from X_2. The highest level of training offered is a B.A. or M.A., which adds $430 to the estimate. Adding in the constant term from the equation, we have $550 plus $430 plus $79 for a total of $1059. The estimated total expense in Table 3 has been rounded to $1060. To show the total to the nearest dollar would imply a degree of precision in the estimate which is wholly unwarranted.

The figures in parenthesis appearing under the coefficients in the regression equation are the standard errors of the coefficients. They are an indication of the precision with which the

TABLE 4: Contributions of Individual Variables to Estimates of Total Expense, Regression #1

Variable		Contribution to Estimate of Y
Full-time or part-time (X_1)		
0	part-time	0
1	full-time	$550
Living at home or at college (X_2)		
0	at home	0
1	at college	$420
Support (X_3)		
0	city or state supported	0
1	privately supported	$300
Highest level of training offered (X_4)		
0	2 but less than 4 years	0
1	B.A. or M.A.	$430
2	Ph.D	860

coefficients are estimated. The numbers shown are one standard error. The chances are estimated to be 95 out of 100 that the true coefficient is within plus or minus twice the value of the standard errors shown. For example, the estimate shown for X_1 is $550. The chances are 95 out of 100 that the true value for X_1 were it obtained from a very large sample would be within plus or minus 2 x $170 or within plus or minus $340 of the $550. Thus, with the size of sample available for these calculations, it is apparent that the coefficients of the independent variables are estimated with a rather low degree of precision. All of the coefficients shown, however, are significantly different from zero, that is, they all differ from zero by an amount equal to at least twice their standard error. Thus, the statistical evidence confirms what was expected in advance, that the total expense of the student would depend on each of the four variables shown.

Other things being equal, therefore, it costs more to attend college full-time than to attend part-time, more to live at college than at home, more to attend a privately supported than a publicly supported institution, and more to attend a university than to attend a liberal arts college or a junior college. Since choice about these matters is likely to be exercised by the student and his parents, they may be thought of as exercising a choice as to the amount which they will spend on college education. Not all choices will be open to all families, but most will have some range of discretion open to them. Some families may seek to enroll the student in a privately supported university which he will attend full-time while living at the institution----the most expensive arrangement. At the other extreme the student may attend a publicly supported institution part-time and live at home----the least expensive arrangement.

Of the 275 students covered in this study who are attending a college or university 14 percent were reported to be attending part-time. In this respect, then, most students select the alternative which is more expensive in terms of cost per year.

Most students also live away from home while attending a college or university. The proportions, based on the same 275 students, are as follows:

Living Arrangements	Percent
Attends an institution 50 miles or more away	51
Attends an institution within 50 miles of home	46
Lives at college	14
Lives at home	31
Lives partly at home, partly at college	1
Not ascertained	3
Total	100

Approximately two students out of three, therefore, must meet the extra expense of board and room away from home and the cost of traveling back and forth from their homes to the institutions they attend.

B. The Main Sources of Funds

As commented earlier there are three principal sources of funds for unmarried college students: scholarships, the students' earnings, and the contributions made by their parents. In addition there are a variety of miscellaneous sources which have various degrees of importance for different individuals. Such miscellaneous sources include gifts from friends and relatives, inheritances, and the G.I. bill.

The distribution of total expenses and of sources of funds for unmarried students is shown in Table 5. Of the mean total expense of $1550, by far the largest part, $950, is borne by parents. Next in importance are students' earnings, for which the average is $360. Scholarships amount to about $130, slightly more than the roughly $110 from miscellaneous sources of funds. The breakdown of total outlay by source of funds is also shown in Graph 2.

The table shows much variation in the frequency of use of different sources of funds. Three students out of four had no scholarship support of any consequence. Of scholarship students 15 percent received less than $500, while 9 percent enjoyed $500 or more. (Graph 3)

Almost all parents with children in college made some contribution to the cost of their education. Only 13 percent report contributions less than $50. Most parents contributed an amount ranging from about $500 to $1500 a year. A few parents

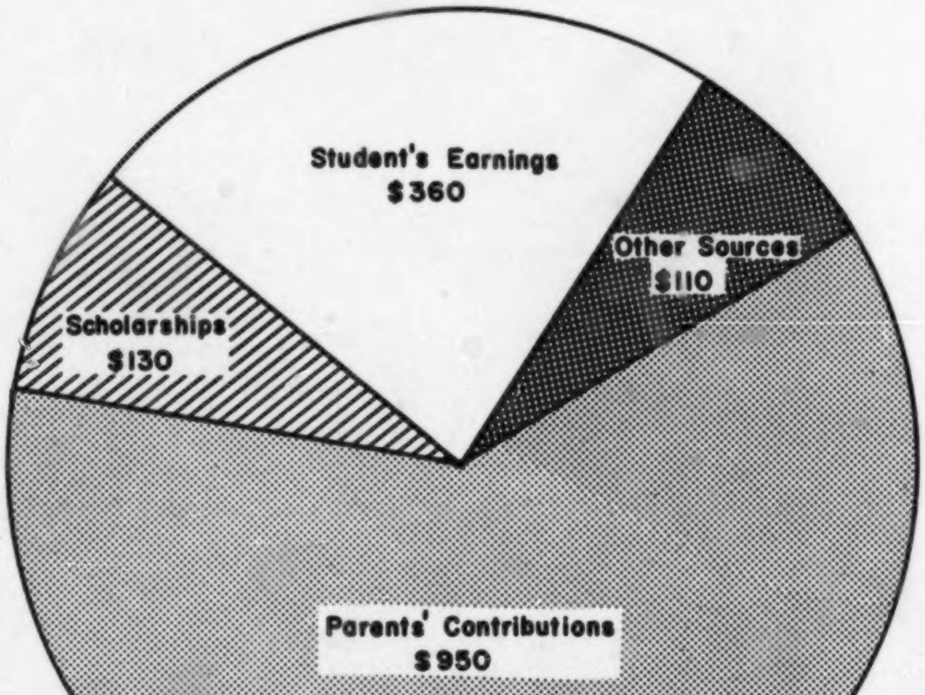
TABLE 5: **Distribution of Total Expenses and Sources of Funds for Unmarried College Students**
(percentage distribution of students now in college)

Dollars	Total Expenses	Scholar-ships	Parents' Contribution	Students' Earnings	Other Sources
0 - 49	*	75	13	44	83
50 - 499 ✓	6	15	17	21	8
✓ 450 - 949	8	8	23	24	6
950 - 1449	28	1	23	7	3
1450 - 1949	31	*	10	1	*
1950 - 2449	16	*	8	1	*
2450 - 2949	5	*	3	*	*
2950 - 3449	4	*	2	1	*
3450 and over	2	*	*	*	*
Total	100	99	99	99	100
Number of students	(232)	(232)	(232)	(232)	(232)
Mean	$1550	$130	$950	$360	$110
Standard deviation	780	350	750	500	300
Median	1600	0	900	100	0

* Less than 0.5 percent.

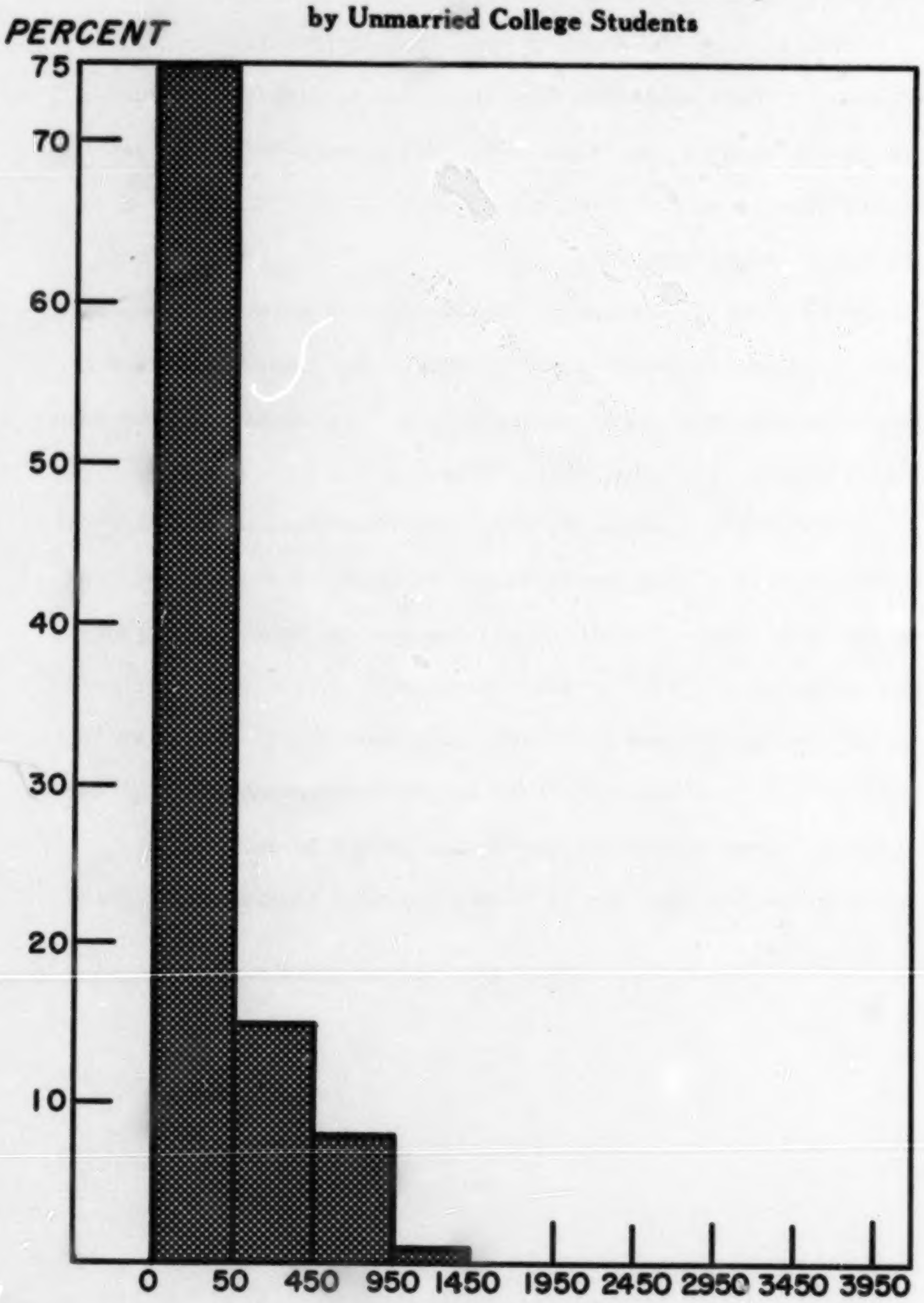
2

Components of the Mean Annual Cost of College for Unmarried Students



3

Funds Received Annually From Scholarships by Unmarried College Students



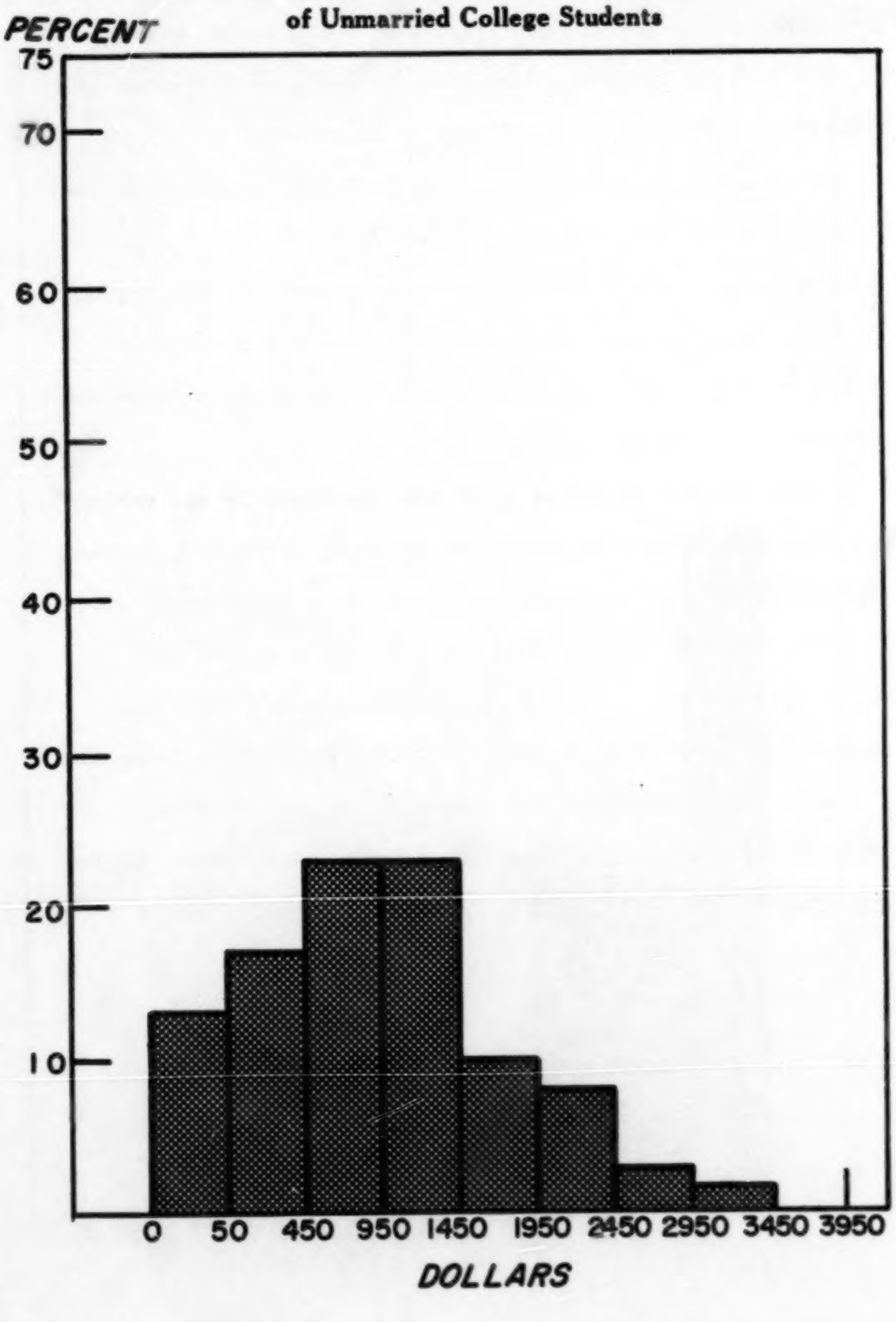
contributed $3000 or more. (Graph 4)

Over half of the students made some contribution to the expense of their education from their own earnings. Two out of ten earned amounts less than $500. Three students out of ten earned amounts in the range from $500 to $1500. Earnings of more than that amount were rare.

Only about 17 percent of the students received any support from the miscellaneous "other" sources. The amounts received were less than $500 in approximately half the cases but more than that amount in the other half. (Graph 5)

These results emphasize again the importance of the parents' contributions. These contributions amounted to about 60 percent of the total funds for students. The average amount contributed was approximately $900 to $1000 per year. Over a four year period this would come to a total of approximately $4000 per student. To most American families $4000 represents a large sum of money. What determines the amount raised by individual families and how that sum is gotten together is discussed in the next chapter.

Parents' Annual Contribution to Expenses of Unmarried College Students



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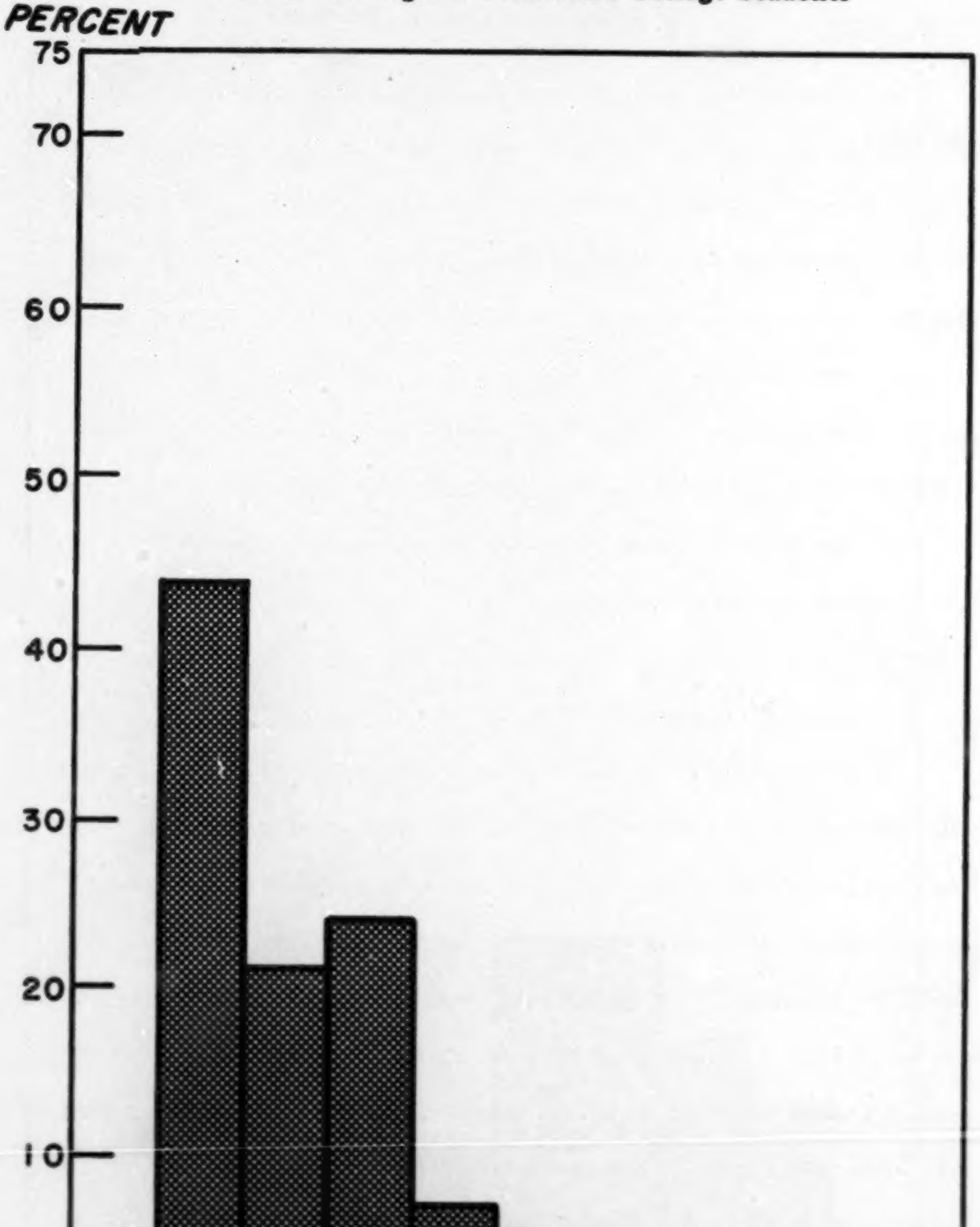
Annual Earnings of Unmarried College Students



III. Raising The Parental Contributions

Four questions arise in connection with parents' experience in raising the money which they contribute to the education of their children. First, since the amount of parents' contribution has been shown to vary substantially from one family to the next, one may ask, what determines the amount contributed by each family? Second, what methods do parents use to accumulate the money? Third, how adequate do they feel their financial contributions are? And fourth, how much difficulty do they experience in raising the money? These questions correspond to the four sections of this chapter.

A. Factors Influencing the Size of Parents' Contributions

It will be recalled that the approach taken here is to assume that parents exercise choice as to the type of educational institution which their child will attend, whether he attends part-time or full-time, and whether or not he lives at home. It would be redundant, therefore, to include the characteristics of the educational institution as well as the attributes of the family itself in predicting the amount of the parents' contribution. Thus, one may think of the parents' financial contribution as determined by the various socio-economic characteristics of the family.

Once again the technique of analysis which has been adopted is that of multiple regression. The particular variables used in this regression are shown in Table 6. This list of variables was used in a preliminary calculation which may be referred to as regression #2A. For reasons discussed below, a variation on this equation, known as regression #2B, is the preferred formulation.

The first variable included in the regression is family income, which may be taken as a measure of the financial resources at the disposal of the family. One would expect that the larger the family income the larger the contribution the parents would make. Both the husband's level of education and the wife's level of education are included also. These variables may be thought of either as measures of the social status of the family or as measures of the familiarity of the family with the benefits of education. Whatever interpretation is placed on these variables, it seems reasonable to predict that there will be a positive association between the level of the parents' education and their willingness to contribute financially to the education of their children.

The sex of the child is included as a variable on the hypothesis that more contribution may be made to the education of daughters than to that of sons. It should be kept in mind that this hypothesis has to do, not with whether the child will attend college at all, but with the amount of the contribution, given

TABLE 6: Definition of Variables for Regression Analysis of Parents' Contributions to Meet Expenses Per Year for Unmarried College Students, Regression #2A

Variable	Symbol	Range	
Parents' contribution	Y	Rounded to the nearest hundred dollars	
Family income	X_1	Rounded to the nearest hundred dollars	
Husband's level of education	X_2	Primary Some high school Complete high school (and/or plus vocational) Some college Complete college Professional	1 2 3 5 7 9
Wife's level of education	X_3		
Sex of child	X_4	Son Daughter	0 1
Number of children in college besides the student	X_5	0, 1, 2, 3	
Number of children who may attend college	X_6	0, 1, 2, 3	

that the child is a college student.

The number of children the family has in college altogether may have a bearing on the ability of the family to contribute to the expenses of a particular student. This variable, therefore, is included as X_5. The family may also take into account the number of children who may attend college from this family in the future, since funds may be kept for them. The number of such children in the family is included as variable X_6.

The results of the calculations, based on 215 cases, were as follows:

(Regression #1A)

$$Y = 271 + .027\ X_1 + 50\ X_2 + 82\ X_3 + 97\ X_4 - 153\ X_5 - 82\ X_6$$

$$(115)\quad(.008)\qquad(28)\qquad(32)\qquad(98)\qquad(110)\qquad(60)$$

The multiple correlation coefficient was .40.

This equation shows a highly significant term for family income, X_1. The regression coefficient is equal to more than three times its standard error, and is, therefore, statistically reliable. The next two variables, X_2 and X_3, refer to the husband's and the wife's level of education. If one accepts the criterion that a coefficient should be equal at least to two times its standard error, the coefficient for the wife, X_3, is significant but that for the husband fails to achieve statistical significance. A coefficient of 56 would be needed for X_2 and the actual coefficient is 50. The data suggest, therefore, that the level of education of the wife may be more important than that of the husband. The difference between these two coefficients, however, is not large and with the size of sample available it is not possible to say with any conviction that there is a reliable difference between the two. In the next calculation, therefore, a combination of the two variables was made, as will be discussed below.

The sex of the child, X_4, proves not related to the amount of the parental contribution. The possibility remains that some difference in parents' outlays for men and women does exist, but, if so, it is too small to appear in the results, given the size of sample at hand.

The variables X_5 and X_6 refer to the number of other children in the family who are now in college or who may attend college, respectively. The results are in the predicted direction. The more other children, the smaller the contribution to the expenses of the student under scrutiny. Neither of these coefficients, however, is statistically significant at the 5 percent level, since neither is twice its own standard error. In the next stage of the calculation these two variables were combined, in the hope that the two might achieve statistical significance if they were thought of as a joint measure of the total number of children to be put through college besides the student under study.

In the calculations for the second regression, therefore, X_5 and X_6 were simply added together to give a measure of the total number of children in the family who are attending college or who are expected to attend college from this family. A new variable , X_7, was introduced which measures the highest level of education attained either by the husband or by the wife. The variable referring to the sex of the child, X_4, was dropped.

The results of the new calculation are shown below:

(Regression #2B)

$Y = 342 + .029\ X_1 - 83\ (X_5 + X_6) + 95\ X_7$

(117) (.008) (51) (27)

$R = .40$

The multiple regression coefficient remained unchanged at .40 for this calculation.

In this equation the estimate for income, X_1, is substantially unchanged from that in the first expression. The combined estimate for $X_5 + X_6$ again shows a negative sign as predicted, but again fails to achieve statistical significance. We prefer to retain this variable, however, primarily on non-statistical grounds. It seems evident that the total number of children that a family must put through college will influence to some extent the contribution that can be made by the family to the expenses of each child.

The coefficient for the new variable for the highest level of education attained by either parent, X_7, is easily significant statistically. There is little doubt that the education of the parents makes a difference in the amount that they are willing to contribute to the education of their children, even when their level of income is taken into account.

Table 7 summarizes the contribution of individual variables to the estimated contribution of the parents based on regression #2B. As there shown, this equation means that the annual contribution of the parents will increase by $2.90 for every $100 increase in the family's income. The amount of the contribution that the family will make also increases with the level of education attained by the parents, from plus $95 if the highest level of education is primary, to plus $855 if one of the parents went beyond a bachelor's degree. The depressing influence of additional children is estimated at $83 per child, as shown in Table 7. It will be recalled that this last result is statistically on rather shaky ground.

In Table 8 appear examples showing estimates based on regression equation #2B of the total contribution per annum of parents to the cost of education for unmarried college students. Example 1 indicates that for a family with an income of approximately $5000, if the highest level of education attained by either parent was high school, and if there is one other child to be educated, the estimated parental contribution will be about $690 a year. At the other extreme, as indicated by Example 6, if the family income is $20,000, at least one parent went to college, and there is only one other child to be educated, it is estimated that the parental contribution will amount to about $1500 a year.

TABLE 7: Contribution of Individual Variables to Estimate of Parents' Contribution, Regression #2B

Variable	Contribution to Estimate
Family Income (X_1)	$2.90 per $100 increase in family income
Highest level of parents' education	
Primary	$95
Some high school	190
Complete high school	285
Some college	475
Complete college	665
Professional	855
Number of children to put through college besides the student	
0	0
1	-$83
2	-166
3	-249

TABLE 8: Parents' Contribution Estimated from Regression #2B for Illustrative Values of the Independent Variables

	Family Income X_1	Highest Level of Education of Either Parent X_7	Number of Other Children to Be Educated X_5 & X_6	Estimated Parental Contribution Y	Standard Error of Estimated Total Expense
Example 1	$5,000	high school	1	$689	$680
Example 2	10,000	high school	0	917	710
Example 3	10,000	college	1	1214	720
Example 4	15,000	college	2	1276	730
Example 5	15,000	high school	0	1062	700
Example 6	20,000	college	1	1504	710

In summary, then, for families that have decided to send their children to college, the amount of the parents' contribution tends to depend on the family income, on the highest level of education attained by either parent, and, probably, on the number of other children in the family to be educated.

B. Methods Used to Raise the Money

There are only a limited number of things which parents can do to raise the money to pay for the education of their children. They can go to work: that is, the father can take another job, or the mother can take a job, or both. They can save up the money in advance. They may receive money from sources outside the immediate family, for example, a gift or inheritance. Parents can cut the living expenses of the family and pay for the education of the children by reducing their current outlay for other purposes. They can borrow the money. Or, they can use some combination of these methods. The next section is concerned with the frequency with which these different methods are reported by different parents.

The data in this section are based on questions about the financing of their children's education asked of families who have had a child in college at any time since 1955. This sample is somewhat larger than that used in the preceding analysis since it includes families whose children have been graduated recently from college as well as those families who have children now attending college. In interviewing parents in this sample, the procedure adopted was essentially to ask the following question: "We're interested in how people manage to raise the money for the college education of their children. How have you people handled this problem?" More specific questions about particular sources of funds were asked subsequent to this general question, but they may be regarded as mere extensions of the general question. The full sequence of questions is shown in Appendix A.

One family out of four reports that it helped to pay for the college education of its younger members by having the parents undertake additional work to increase the family income. The father did extra work by taking an additional job, or working overtime or something of this sort in 8 percent of the families. The mother took a job or increased her outside work in about 19 percent of the families, as shown in Table 9. Since it may be assumed that most of the fathers were employed already, it is not surprising that it is more common for the mother to take a job when the children go to college than for the father to take an additional job. Usually at this stage, the mother no longer must care for toddlers at home, so her domestic responsibility is reduced; and, at the same time, family expenses increase with the addition of college costs.

About half of the families report that they had money set aside before the children entered college, which could be used

TABLE 9: Additional Work of Family Members Other Than Students Reported by Parents (percentage distribution of families who have had a child in college since 1955)

Additional Work 1/	Percent
Family members (other than students) worked more	27
Father took another job or worked more	6
Mother took a job or worked more	17
Both father and mother worked more	2
Others in the family worked more	*
The family worked more, not clear who was involved	2
No family members (other than students) did additional work	71
Not ascertained	2
Total	100
Number of families	(338)

* Less than 0.5 percent.

1/ The data in this table are based primarily on answers to the following question: "Have you people made any special efforts to increase your income to help meet the expenses of educating the children?"

to help pay the cost of their education. (Table 10) Not all of these families, however, report that the money was set aside specially for the purpose of educating the children. Only three out of ten families report money set aside for the special purpose of education which they in fact used for that purpose. For two out of ten it is not clear to what extent the money was intended in advance for education. The remainder did not use funds set aside in advance.

These results do not indicate any very high degree of advance planning by parents for the education of their children. The normal progression of children through their elementary and secondary education is as predictable as are most events in human affairs. Given that a child has entered the first grade, one knows within a small margin of error when he will graduate from high school and will need funds for college if he is to go on to college. As will be discussed in a later chapter, most families know well in advance that they would like to have their children attend college. Attending college is not a new idea which suddenly comes to their attention when the children are about to leave high school. Nevertheless, as just noted, about half of the families did not report that they had any funds set aside which they could use to help pay for the education of their children.

Almost all of the people who had money set aside in advance which they used for education had saved this money out of income

TABLE 10: Money Set Aside by Parents Before Children Entered College
(percentage distribution of families who have had a child in college since 1953)

Money Set Aside 1/	Percent
Report money set aside	48
Report money was saved specially for education	29
Report money was saved partly for education, partly for other things	3
Report money was not saved specially for education	9
Not clear; don't know; not ascertained	7
Do not report money set aside	45
Don't know; not ascertained	7
Total	100
Number of families	(338)

1/ The questions were: "Did you have any money set aside before the children entered college which could be used to help pay the cost of going to college?" "Had you saved it specially for education?"

as is shown in Table 11. Of those with money set aside, 87 percent report that some or all of the money was saved from income. About 10 percent, however, report that some part of the money came from an inheritance, while 4 percent report that some or all of the funds were a gift.

Those who did have funds set aside were asked how far in advance they started to save the money for the education of their children. On the average people report that they began to save up these funds about ten years in advance. (Table 12) There is much variation with regard to this interval, however, and the distribution shows a standard deviation of approximately seven years. A few people report that they began saving the money 25 or more years before the children went to college. At that time, of course, the money may not have been intended to finance the education of the children. About one family in four who has saved any money started saving it 15-19 years before the children entered college, that is, at about the time when the children were born. An additional fourth began saving the money 10-14 years in advance, at about the time when the children began their elementary education. The remainder, or about 4 out of 10 of the families who had money set aside, began saving the money during the period when the children were enrolled in school. Some 22 percent started saving only when the children were already in high school. The main conclusion to which this distribution leads is that there is no tendency for any one stage in the

TABLE 11: Sources of Money Set Aside in Advance and Used for Education (percentage distribution of families who had money set aside)

Source [1]	Percent
Saved out of income	87
Inherited	10
Gift	4
Not ascertained	7
Total	100 [2]
Number of families who had money set aside	(161)

[1] The question was: "Was this money you had saved out of your income, or was it inherited, or given to you or what?"

[2] Detail will not add to total since families might report more than one source.

TABLE 12: Number of Years Before Children Went to College That Parents Started Setting Money Aside
(percentage distribution of families who had money set aside)

Number of Years [1]	Percent
1 - 4 years	22
5 - 9 years	17
10 - 14 years	26
15 - 19 years	24
20 - 24 years	9
25 - 29 years	2
Total	100
Number of families	(81)[2]
Mean	10.4 years [3]
Standard deviation	6.6 years

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[1] The question was: "How many years before the children went to college did you start setting money aside for their education?"

[2] This table is based only on those families who gave a quantitative estimate of the number of years in advance that they began setting money aside.

[3] The mean and standard deviation were calculated from the ungrouped data.

children's careers to be the time at which parents generally start setting aside the funds to pay for a college education.

People also differ with regard to the form in which they kept the money that they set aside for education, but, as shown in Table 13, nearly 9 out of 10 had the money in one form or another of fixed value assets. The most frequent forms were savings accounts or government bonds. About one out of four of those who had money saved in advance had the money in endowment insurance. This form of saving money is of special interest in that it implies a commitment made well in advance to save money regularly for education. Since only half the families used money saved in advance, one in four of this group is equal to about one family in eight of those who have had children in college recently. Only this small proportion report that they had endowment insurance available to help pay the bills.

Only a relatively small proportion of the families who had money set aside report that the funds were kept in fluctuating value assets. Approximately one out of 10 families who had money set aside had the money in common stock, while a few others had funds invested in real estate.

A relatively small proportion of all families who had a child in college since 1955 report that they had available funds other than those that have been mentioned. As shown in Table 14, about 8 percent report that they had money from people outside the immediate family in the form of a gift or a bequest. Approximately

TABLE 13: Form in Which Money for Education Was Kept by Parents
(percentage distribution of families
who had money set aside)

Form 1/	Percent
Fixed value assets	86
Endowment insurance	34
Savings account or government bonds	63
Other fixed value assets	6
Fluctuating value assets	16
Real estate	3
Common stock	11
Other fluctuating value assets	2
Don't know; not ascertained	14
Total	100 2/
Number of families who had money set aside	(161)

1/ The question was: "Did you have this money in an endowment policy, savings account, savings bonds, or corporate stock or somewhere else? (Which?)"

2/ Detail will not add to totals since families might keep funds in several forms.

TABLE 14: Other Sources of Funds Reported by Parents
(percentage distribution of families who have had a child in college since 1953)

Source of Funds	Percent
Inheritance or gift	6
G.I. bill	7
Scholarships	8
Don't know; not ascertained	3
No mention of any of these sources	74
Total	100 1/
Number of families	(338)

1/ Detail will not add to total since families might receive funds from several of these sources.

an equal number of families during this period benefited from the G.I. bill. Finally, about 8 percent mentioned scholarship assistance. This last result is almost certainly an understatement. This sequence of questions was oriented more toward the money which came from outside the family, and people may not have reported scholarships as often as they in fact occurred. A more adequate estimate of the frequency of scholarships is found in the previous section in which it is shown that about one college student out of four receives at least some scholarship assistance (see Table 3). The 8 percent who report scholarships in Table 14 is approximately equal to the 8 percent or 9 percent of families with students now in college who report scholarship assistance in the amount of $100 or more.

This understatement of funds from one outside source suggests that there may also be some understatement in the frequency with which people mention gifts or inheritances and the G.I. bill. However, since the questions were about how people have "managed to raise the money" it seems probable that they would think of money from a gift as money which had passed through their hands. A gift helps one to raise the money whereas a scholarship reduces the money one needs to raise.

It is probable that most of the families take at least some of the money to pay for the education of their children out of their current income. (Table 13) Some families may make the payments entirely out of income by reducing their expenditures,

TABLE 15: Effect of Cost of Education on Current Expenditures of Family Reported by Parents
(percentage distribution of families who have had a child in college since 1955)

Effect on Current Expenditures	Percent
Explicitly mentions paying for college out of current income	37
Mention of reduced expenditures, living on a budget, etc.	7
No clear reference to payments out of current income or reduction of current expenditures	56
Total	100
Number of families	(223)[1]

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[1] This table is based on interviews taken in the spring of 1960 only.

living on a budget, and so forth. Nearly half of the families who have had a child in college since 1955 mentioned paying for college out of current income or paying for it by reducing expenditures, which comes to much the same thing. It is not easy to form a judgment as to the extent to which the reduction in current expenditures was a difficult or painful adjustment in contrast to a rather easy transfer of funds from one use to another. More direct information on how difficult people found it to pay for college is found in the last section of this chapter.

About 14 percent of the families report borrowing as a source of funds to help pay for the childrens' education. (Table 16) In view of the considerable number of families who had no money saved in advance, it is not surprising to find that at least some families borrowed to help pay for their education. Considering the frequency with which people borrow to purchase such items as automobiles, it may be surprising that more people do not report borrowing to help pay for the education of their children.

One aspect of the data, which may be of some importance, is the indication of the relative frequency of borrowing by the student and by the family. The data suggests that it is nearly twice as frequent for the family to borrow as for the student to borrow. Approximately 8 percent of the families report that they borrowed, whereas about 5 percent of the students borrowed. This result suggests that the usual feeling is that the responsibility

TABLE 16: Borrowing as Reported by Parents
(percentage distribution of families who have had a child in college since 1955)

Borrowing [1]	Percent
Report borrowing	14
Family borrowed but not student	7
Student borrowed but not family	4
Both family and student borrowed	1
Borrowing, not clear by whom	2
No borrowing reported	79
Don't know; not ascertained	7
Total	100
Number of families	(338)

[1] The question was: "Have you borrowed any money to help pay for the children's education or did they borrow any?"

for paying for the education of the student belongs to the family rather than to the student himself. The frequency with which different methods of financing are reported is summarized in Graph 6.

C. The Adequacy of Parents' Contributions in Their Own Eyes

Because many parents do not plan in advance for the college education of their children, one may ask, to what extent parents in general feel that their financial contribution has been adequate? To measure this attitude people were asked directly: "Do you feel that the financial help you have given to the education of your children has been as much as they needed or do you wish it could have been more?"

As shown in Table 17, most families feel that their contribution was as much as needed. About 3 out of 10, however, give clear indication that they feel that their contribution "could have been more".

There is a strong relation between family income in 1959 and the feeling of the parents about the adequacy of their contribution to the education of their children. Of those with family incomes under $3000, only 7 percent clearly state that the contribution was as much as needed. Of those with incomes of $15,000 and over, 82 percent make this statement. The proportion who feel that the contribution was adequate rises regularly as income rises from under $3000 to the level of $15,000 and over. It seems reasonable

2

Selected Methods of Raising Their Contribution Reported by Parents

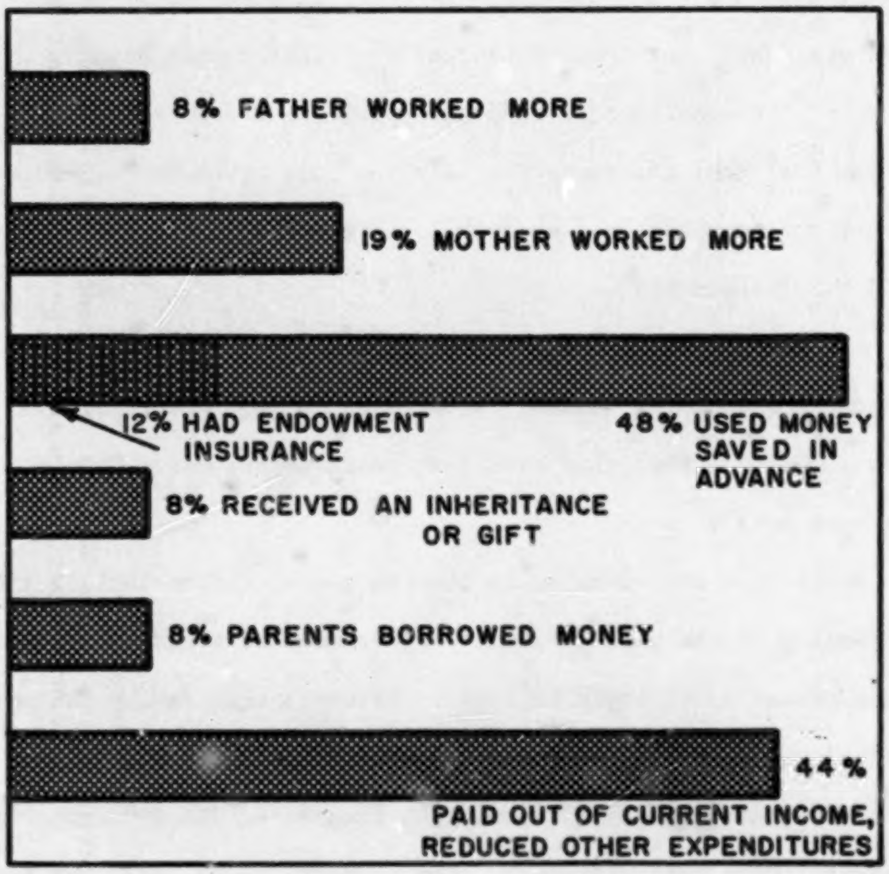

TABLE 17: Relation Between Parents' Feeling About Adequacy of Their Contribution to Children's College Education and Family Income in 1959
(percentage distribution of families who have had a child in college since 1955

Feeling About Adequacy of Contribution 1/	All Families	Family Income in 1959					
		Under $3000	$3000-$4999	$5000-$7499	$7500-$9999	$10,000-$14,999	$15,000 and Over
As much as they needed	51	7	30	44	51	62	82
What they needed in some ways, not in others	2	4	2	2	4	*	*
Could have been more	30	50	43	39	25	23	12
Don't know; not ascertained	17	39	25	15	20	15	6
Total	100	100	100	100	100	100	100
Number of families	(338)	(28)	(44)	(52)	(49)	(48)	(33)

* Less than 0.5 percent.

1/ The question was: "Do you feel that the financial help you have given to the education of your children has been as much as they needed or do you wish it could have been more?"

to interpret this relationship as based on the realities of the situation. Parents in the lower income groups did less to defray their children's educational expenses than upper income parents. The regression analysis in the first section of this chapter pointed in that direction.

Whether people feel that their contributions were adequate is related also to whether or not they had money set aside beforehand that could be used for the education of their children. This relation is shown in Table 18. Of those who had money so set aside, 66 percent said definitely that they felt that the contribution was as much as the children needed. Of those who had no money set aside beforehand, 41 percent replied that it was adequate.

This relationship is one of those which one expects in advance and observes with a sense that it is entirely appropriate. People who set aside money beforehand presumably do a more adequate job in financing education and should feel that their contribution has been more nearly adequate.

D. The Ease or Difficulty of Obtaining the Money

From the point of view of the parents looking back on their experience in financing the education of their children, the situation has two aspects: how adequate a job they did and how difficult it was for them. The feeling of the parents about the difficulty of meeting the costs was obtained by asking the following question: "Would you say it has been easy or difficult

TABLE 18: Relation Between Parents' Feeling About Adequacy of Contribution to Children's College Education and Whether Money was Set Aside Before Children Entered College

(percentage distribution of families who have had a child in college since 1955)

Feeling About Adequacy of Contribution 1/	All Families	Money Set Aside Beforehand	
		Money Set Aside Beforehand	No Money Set Aside Beforehand
As much as they needed	51	66	41
What they needed in some ways, not in others	2	3	*
Could have been more	30	22	44
Don't know; not ascertained	17	9	15
Total	100	100	100
Number of families	(338)	(161)	(152)

* Less than 0.5 percent.

1/ The question was: "Do you feel that the financial help you have given to the education of your children has been as much as they needed or do you wish it could have been more?"

for your family to meet the cost of educating the children?" The answers seem to fall into about equal groups. (Table 19) About 4 families in 10 report that it was easy, and about an equal number report that it was difficult, with the balance giving some intermediate answer or not answering the question at all.

There is a correlation between whether people feel that their contribution was adequate and how they feel about the difficulty of meeting the cost. Of those who felt that their contribution was as much as had been needed, 57 percent said that meeting the cost was easy for them. Of those who thought their contribution could have been more, only 21 percent stated that meeting the cost had been easy. Two out of three of those families who thought that the contribution could have been more also reported that they had found it difficult to meet the cost of educating the children.

Difficulty in meeting the cost is directly related to the income of the family as is shown in Table 20. Of those with incomes under $3000, only 14 percent report that they found it easy to meet the cost of educating their children. Of those with incomes over $15,000, 64 percent report that they found it easy to meet the cost of educating their children. Even at the income level $10,000 to $14,999, the proportion of families who found it difficult to meet the cost of educating the children was substantial, amounting to 36 percent of all families who had children in college since 1955. At the lower income levels this proportion is even larger. There can be no question that many

TABLE 19: Relation Between Parents Feeling About Meeting Cost of Children's College Education and Their Feeling About Adequacy of Contribution to Children's College Education

(percentage distribution of families who have had a child in college since 1955)

Feeling About Meeting Cost [1]	All Families	Feeling About Adequacy of of Contribution As Much as They Needed	 Could have Been More
Easy	39	57	21
Easy in some ways and difficult in others	7	8	5
Difficult	38	30	67
Don't know; not ascertained	16	5	7
Total	100	100	100
Number of families	(338)	(171)	(108)

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[1] The question was: "Would you say that it has been easy or difficult for your family to meet the cost of educating the children?"

TABLE 20: Relation Between Parents Feeling About Meeting Cost of Children's College Education and Family Income in 1959
(percentage distribution of parents who
have had a child in college since 1955)

Feeling About Meeting Cost 1/	All Families	Family Income in 1959					
		Under $3000	$3000-$4999	$5000-$7499	$7500-$9999	$10,000-$14,999	$15,000 and Over
Easy	39	14	27	37	41	52	64
Easy in some ways, difficult in others	7	*	5	4	8	4	12
Difficult	38	47	57	40	35	36	21
Don't know; not ascertained	16	39	11	19	16	8	3
Total	100	100	100	100	100	100	100
Number of families	(338)	(28)	(44)	(52)	(49)	(48)	(33)

* Less than 0.5 percent.

1/ The question was: "Would you say it has been easy or difficult for your family to meet the cost of educating the children?"

people in the lower income groups must struggle to meet the cost of educating their children.

People who reported that they found it difficult to meet the cost of educating their children were asked what they had in mind. Answers to this question are shown in Table 21. Over half of the families who stated that they felt it was difficult report that they had to reduce their current expenditures, live on a budget, or refrain from buying new things in order to meet the expense of putting their children through college. This response is by far the most frequent of those made by families who experienced difficulty. About 10 percent of those who said it was difficult had in mind that someone in the family had to work more than they otherwise would have. In these families, evidently, someone in the family entered the labor force or worked extra only because they found it necessary to do so in order to meet the college expenses, and the experience was one which led to the feeling of strain. About 10 percent or 12 percent of the families report that other events which took place during the time when they were paying for the education of their children tended to make that financial obligation difficult to meet. For example, people might refer to the fact that during this period someone was unemployed, or ill, or they might refer to some other large expenditure or other reason for a reduction in the family income during the period when this particular financial obligation had to be met.

TABLE 21: Reasons Why People Felt It Was Difficult to Meet the Cost of Educating Their Children
(percentage distribution of families who report that it was difficult)

Reasons for Feeling It Was Difficult	Percent
Had to sell assets	*
Had to reduce current expenditures, live on a budget, not buy new things	53
Someone in the family had to work more	10
Other events made paying for education difficult (unemployment, illness of someone in the family, etc.)	12
Other reasons	16
No reason mentioned; not ascertained	9
Total	100
Number of families reporting difficulty	(129)

* Less than 0.5 percent.

Parallel information was obtained from the people who found it easy to meet the cost of educating their children. The reasons which they gave for feeling that it was easy are tabulated in Table 22. Not all respondents were articulate on this point, and, in a number of interviews, no specific reason for feeling that it was easy was mentioned. In 18 percent of the families, the comment was made that paying for the cost of educating the children was easy because they received an inheritance or a gift from someone outside the family or because the family income was already ample. A second group of 18 percent of the families noted that it was easy because plans to meet the educational expenses had been made in advance. These families seemed to have been reaping the benefits of saving before the children entered college.

The other reasons for feeling that it was easy to meet the cost of educating the children amount to propositions to the effect that the cost of education to the family was low. The children financed their own education in about 10 percent of the families who found it was easy. From the point of view of the parents it is understandable that putting these children through college was not difficult. In about the same number of families there was enough outside help from the G.I. bill or from scholarships to make it easy for the parents. Finally, there is a group of similar size, about 9 percent of those who found it easy, who report that the financial burden was light because the children lived at home and the cost of their education was low.

TABLE 22: Reasons Why People Found It Easy to Meet The Cost of Educating Their Children (percentage distribution of families who report that it was easy)

Reasons for Feeling It Was Easy	Percent
Inheritance, gift, ample income	18
Plans were made in advance to meet the cost	18
Outside help from the G.I. bill or scholarships	9
The children financed their own education	10
Children lived at home and the cost was low	9
Not ascertained; no reasons mentioned	38
Total	100 1/
Number of families reporting it was easy	(133)

1/ Detail will not add to total since a few people mentioned more than one reason.

Whether people found it easy or difficult to meet the educational expenses of their children is important, as well as whether they thought their contribution was adequate. Neither dimension alone tells the full story, however. It is the combination of these two dimensions that is the most revealing about the financial arrangements of the family. Those families who reported both that they found it relatively difficult to finance their children's college education and that the financial help which they gave to their children was inadequate are the ones for whom the problems were the most serious. The remainder of this section is devoted to an analysis of these families. They amount to about 21 percent of all those families who have had a child in college since 1955. The question raised in this analysis is, what characteristics of a family are related to whether or not it falls in this group?

In view of the findings shown in Table 20, it is not surprising to find that there is a relation between income and reporting financial hardship. Of those with family incomes under $5000, 36 percent report both that they found it difficult to finance their children's college education, and that they felt that their financial help was inadequate. Of those in the income group over $10,000, 11 percent report financial difficulties.

In view of this relation, it would be reasonable to expect a parallel relation between the occupation of the head of the family and reported financial difficulty. But in fact, as shown in Table 24, there is very little relation between the occupation of the head of the family and reports of financial hardship.

TABLE 23: Relation Between Reporting Financial Difficulty in Sending Children to College and Family Income in 1959
(percentage distribution of families who have had a child in college since 1955)

Reported Financial Difficulty	All Families	Family Income in 1959 Under $4999	$5000 -9999	$10,000 and Over
Parents found it difficult to finance children's college education and felt their financial help was inadequate	21	36	21	11
All others	79	64	79	89
Total	100	100	100	100
Number of families	(338)	(72)	(101)	(81)

TABLE 24: Relation Between Reporting Financial Difficulty in Sending Children to College and Occupation of Family Head (percentage distribution of families who have had a child in college since 1955)

Reported Financial Difficulty	All Families	Occupation of Family Head Profess-ional, Technical	Self-employed, Managerial	Clerical, Sales	Crafts-men, Foreman	Others
Parents found it difficult to finance children's college education and felt their financial help was inadequate	21	17	17	23	21	25
All others	79	83	83	77	79	75
Total	100	100	100	100	100	100
Number of families	(338)	(46)	(76)	(48)	(76)	(52)

To the extent that there is any indication of such relation, it is in the predicted direction. That is, those families in which the head is a professional or managerial worker seem to be slightly less likely to report financial difficulty than others.

Family income appears to be the crucial variable, not occupation. The number of children in the family is another variable logically related to family financial problems in sending children through college. Table 25 shows that there is a relation between the number of children in the family and parent's reports of difficulty in financing the children's college education. Of one-child families, only about one out of ten found the expense of college education difficult to meet. In families with two or three children, this proportion is somewhat higher. When there are four children, about two out of ten families report difficulties. And of the few families with five or more children, four out of ten report financial difficulty.

One would expect a tendency for people with money set aside in advance to find it easier to pay for the education of their children. This tendency is corroborated in Table 26. Of those with money set aside in advance, about 15 per cent report both that it was difficult to finance the children's education and that their financial help was inadequate. Among those families with no money set aside, the proportion who encountered financial difficulties is twice as high.

TABLE 25: Relation Between Reporting Financial Difficulty in Sending Children to College and Number of Children in Family
(percentage distribution of families who have had a child in college since 1955)

Reported Financial Difficulty	All Families	Number of Children in Family: One	Two	Three	Four	Five or More
Parents found it difficult to finance children's college education and felt their financial help was inadequate	21	11	18	17	22	44
All others	79	89	82	83	78	56
Total	100	100	100	100	100	100
Number of families	(338)	(45)	(117)	(90)	(40)	(45)

TABLE 26: Relation Between Reporting Financial Difficulty in Sending Children to College and Having Money Set Aside Before Children Enter College
(percentage distribution of families who have had a child in college since 1955)

Reported Financial Difficulty	All Families	Money Set Aside Yes	Money Set Aside No
Parents found it difficult to finance children's college education and felt their financial help was inadequate	21	15	30
All others	79	85	70
Total	100	100	100
Number of families	(338)	(161)	(152)

The four tables just discussed relate to factors which may be regarded as causes of financial difficulty. That is, a family may experience difficulty because its income is low, because the head is in an occupation which is poorly paid, because it has many children to educate, and because it set aside no money in advance. The next two tables are concerned with variables which are not so much causes of financial difficulty as symptoms of the difficulty itself.

Of those families who report that someone borrowed money in order to pay for the education of the children, half also report that the parents found it difficult to finance the children's education. This association between borrowing and a sense of financial strain suggests that borrowing to pay for education of children is regarded by most people as something to be done only when the need is acute and no other funds are readily available. (Table 27)

In the same way, as shown in Table 28, it is a symptom of financial strain for some families if a family member gets a job or works more in order to pay for the education of the children. Of the families in which a family member worked more, 30 percent report both difficulty in financing the children's education and feeling that their help was inadequate. Of families in which no one worked more, about 18 percent report the same level of difficulty. This difference is not large from a statistical point

TABLE 27: Relation Between Reporting Financial Difficulty in Sending Children to College and Borrowing
(percentage distribution of families who have had a child in college since 1955)

Reported Financial Difficulty	All Families	Borrowing Family Members Borrowed	 Family Members Did Not Borrow
Parents found it difficult to finance children's college education and felt their financial help was inadequate	21	51	17
All others	79	49	83
Total	100	100	100
Number of families	(338)	(49)	(266)

TABLE 28: Relation Between Reporting Financial Difficulty in Sending Children to College and Additional Work By Family Members
(percentage distribution of families who have had a child in college since 1955)

Reported Financial Difficulty	All Families	Family Member Got a Job or Worked More	Family Member Did Not get a Job or Work More
Parents found it difficult to finance children's college education and felt their financial help was inadequate	21	30	18
All others	79	70	82
Total	100	100	100
Number of families	(338)	(92)	(243)

of view, nor is the difference in the proportions as striking as in Table 27. It is tempting to speculate that for the mother in the family to go to work may be regarded as a normal method of paying for the education of the children, while to borrow money is regarded as an unusual method.

It is the main conclusion of this analysis that there is a substantial minority of families who do experience real difficulty in providing for the education of their children. These families tend to be either those whose resources are small because their income is low or because they have not saved in advance, or those whose outlay for education is unusually large because of the large number of children in the family to be educated.

IV. People's Plans for Financing College for Their Children

A major purpose of this study has been to discover what plans parents are now making for the future college education of their children. The children who will enter college in the next sixteen or seventeen years already have been born, and, for the most part, already are in school. In this study a random sample of the parents of children who are potential college students has been asked about their current financial planning for future higher education.

Before questions could be asked about the financing of the education of these future students, it was necessary to find out which parents now expect their children to go to college. Plans that parents have for the education of their children are of interest for the light they may shed on probable future enrollment in colleges and universities. With this objective in mind these plans are subject to scrutiny in the next chapter. By way of introduction to the discussion of planned financing, however, it is necessary to raise the question, what proportion of parents of children of different ages expect their children to attend college or graduate from college?

The answers to this question arranged in summary form are shown in Table 29. The first impression one receives from this table is that expectations parents have for their children are high. Of those children aged 1 through 9 years in 1960, 62 percent

TABLE 29: Educational Status of Children Within Various Age Groups in 1960 Reported By Their Parents
(percentage distribution of children)

Educational Status of Child	All Children	Age of Child in 1960 1 - 9	10-14	15-17	18-19	20-29	30-39
Expect to attend college	38	62	64	49	12	*	*
Attended or attending college	10	*	*	*	28	29	23
Does not expect to or did not attend college	38	23	30	44	54	68	39
Not ascertained	14	15	6	7	6	3	38
Total	100	100	100	100	100	100	100
Number of children	(5317)	(1925)	(907)	(507)	(230)	(964)	(784)

* Less than 0.5 percent.

are expected by their parents to attend college! It may be that not every parent expects his child to be president, but it certainly seems to be true that nearly every parent expects his child to go to college!

The expectations for the next older age group shown, those 10 through 14 years old in 1960, are equally ambitious. The parents of children of this age expect two-thirds of them to attend college. Even of those aged 15-17 years, half are expected by their parents at least to attend college. These expectations are unreasonably high, as will be shown in the next chapter.

A. Saving Now to Finance Education in the Future

When they planned this study, the investigators expected that the nearer people are to having children in college-that is, the older the oldest child in the family-the more likely the family would be to have money set aside for education. This expectation also would be consistent with the results in the previous chapter where it was shown that on the average people start setting aside money about 10 years before their children enter college, and that some people do not set aside money until a few years before the first child actually matriculates. These expectations received a shock when the data in Table 30 were prepared. This table is based on answers to the following questions: "Have you set aside any money especially to help pay for (their) college education?" and "Is this money intended just for

TABLE 30: Relation Between Money Set Aside by Parents Before Children Enter College and Age of Oldest Child (percentage distribution of families with a child not yet in college who has a chance to attend)

	Plans						Actual
	All	Age of Oldest Child					All
Money Set Aside[1]	Families	1 - 6	7 - 12	13 - 15	16 - 18	Over 18	Families[2]
Report money set aside	46	48	56	49	39	39	48
Report money saved specially for education	37	36	48	35	34	33	29
Report money saved partly for education, partly for other things	7	9	6	10	3	5	3
Not clear whether money saved specially for education	2	3	2	4	2	1	16[3]
Do not report money set aside	49	51	44	49	59	59	45
Don't know; not ascertained	5	1	*	2	2	2	7
Total	100	100	100	100	100	100	100
Number of families	(1104)	(275)	(322)	(133)	(135)	(191)	(338)

[1] The data in this table are based on answers to the following questions: "Have you set aside money especially to help pay for (their) college education?" "Is this money intended just for the children's education, or may some of it be used for other purposes?"

[2] The "actual" column is based on data for families who have a child in college now or have had a child in college since 1955.

[3] This entry in the "actual" column includes answers from people who said they did use funds which were not saved specially for the purpose of education. Compare Table 10.

* Less than 0.5 percent.

the children's education, or may some of it be used for other purposes?" This table was constructed only for those families who report that there is at least one child in the family not yet in college who has a chance to attend.

It will be recalled that the proportion of families who expect their children to enter college seems to be unreasonably high. The data in Table 30 show that approximately half of the parents with children under 15 who say that their children have a chance to attend college also report that they have money set aside which can be used to help pay for college. Most of these families report that the money was saved especially for education. The last column in Table 30 shows that of those families who in fact have a child in college now or who have had a child in college since 1955, about half were able to use money set aside in advance to help pay the college bills. Of this group, only about three out of ten report that they had funds saved especially for education which they actually used for this purpose. The parents of children of every age shown in Table 30 already have reached or passed that saving level.

If the parents whose children are 1 to 6 years old behave in the same way as those parents who have had children in college recently, half of those who save up money for education will begin to do so within the 10 year period before their first child enters college, that is, within the next ten or fifteen years. On this basis one would expect that the estimated 36 percent of the parents with children aged now 1 to 6 who have money saved especially for education would double to over 70 percent by the time the children enter college! While this projection may be unrealistic, it is clear that parents with young children at the present time are making more adequate preparation for financing the education of their children than did those whose children are now in college.

The same observation may be made about the next group. Of those parents with children now aged 7 to 12, 48 percent already have saved money especially for education, compared to 29 percent actually observed for families who have had children in college recently. The increase, from 36 percent of those with oldest child 1 to 6, to 48 percent of those with the oldest child aged 8 to 12, is consistent with the original expectation of the investigators that this proportion would rise gradually as people came closer to the day when the money would be required.

The parents whose oldest child is now 13 to 15 or older do not seem to be quite so well prepared. The data indicate that only about one-third of this group has money saved especially for education, which would be approximately the same proportion as that observed for the families who recently have had children in college.

Which groups in the population are most likely to have funds set aside for the education of their children? An economist would expect more people in the upper income groups to have money set aside on the ground that they are better able to save money.

A sociologist would make the same prediction though he might stress the greater concern with education in the upper socioeconomic strata.

The results in Table 31 confirm the prediction that upper income people are more likely to have money set aside. Of families with incomes under $3000 who expect one or more children to enter college, only 16 percent say they have money set aside. Of families in the income group over $10,000, 63 percent report money set aside. Thus, money set aside in advance will be available to help the families who will be in the position to contribute most from current income. As shown in Chapter III, the upper income families are also the ones who spend most on their children's education. The improved level of saving by families in the middle income groups is particularly interesting. For these families money set aside in advance may make the difference between attending college and not attending college.

Whether or not a family has money set aside also depends on the number of children under 18 in the family (Table 32). Those families with four or more children under 18 are less likely to report money set aside than those families with one, two, or three children under 18. This result is consistent with the interpretation that large families tend to be under more financial strain and are less able to save up money in advance. It was shown earlier that large families report more difficulty in financing the education of their children. That result was based on data

TABLE 31: Relation Between Money Set Aside By Parents Before Children Enter College and Family Income In 1959

Money Set Aside	All Families	Family Income in 1959 Under $3000	$3000 -4999	$5000 -7499	$7500 -9999	$10,000 and Over
Report money set aside	46	16	36	50	51	63
Report money saved specially for education	37	14	29	39	46	52
Report money saved partly for education, partly for other things	7	2	5	9	3	8
Not clear whether money saved for education	2	*	2	2	2	3
Do not report money set aside	49	73	57	45	46	36
Don't know; not ascertained	5	11	7	5	3	1
Total	100	100	100	100	100	100
Number of families	(1105)	(102)	(241)	(406)	(166)	(157)

* Less than 0.5 percent.

TABLE 32: Relation Between Money Set Aside by Parents Before Children Enter College and Number of Children Under 18 in Family
(percentage distribution of families with a child not yet in college who has a chance to attend)

Money Set Aside	All Families	Number of Children Under 18 in Family				
		One	Two	Three	Four	Five or More
Report money set aside	46	49	52	51	31	30
Report money saved specially for education	37	34	35	42	25	15
Report money saved partly for education, partly for other things	7	9	15	8	4	6
Not clear whether money saved specially for education	2	6	3	1	2	9
Do not report money set aside	49	47	43	48	67	67
Don't know; not ascertained	5	4	4	1	2	3
Total	100	100	100	100	100	100
Number of families	(594)	(176)	(172)	(132)	(48)	(33)

from people who have children in college now or had children in college within the past five years, a different group, for the most part, from those who have children whom they expect to send to college.

Thus, the study of these two groups leads to the same conclusion, that families with several children are more likely to experience financial strain than those with fewer children.

It may be argued that there is some doubt as to the meaning of statements by parents that they have money set aside especially for the education of their children. Money is by its nature flexible, and it is probable that some of these funds will be spent for purposes other than educating the children. It is, after all, highly acceptable socially to set aside money to educate one's children. Perhaps people who have had that idea more or less in the back of their minds may mention such savings to an interviewer, but in fact may spend the money for less laudable purposes.

There is one form of setting aside money for education, however, which makes this kind of behavior unlikely. If the money is set aside in endowment insurance which matures when the child is ready to enter college, it seems probable that it will not be used for other purposes. Of course, even endowment insurance _can_ be used for other purposes and people _can_ borrow against the policy. But money in this form is as clearly earmarked as any funds are likely to be. For this reason the data in Table 33 and Graph 7 are of special interest since they show the proportion of families

TABLE 33: Relation Between Form in Which Money for Education is Kept by Parents and Age of Oldest Child
(percentage distribution of families with a child not yet in college who has a chance to attend)

Form 1/	Plans All Families	Age of Oldest 1 - 6	7 - 12	13 - 15	16 - 18	Over 18	Actual All Families 3/
Fixed value assets	36 2/	39	44	41	30	27	42
Endowment insurance	22	20	32	23	16	14	12
Savings account or government bonds	22	22	25	26	20	22	30
Other fixed value assets	2	2	2	2	3	*	3
Don't know; not ascertained	2	2	1	2	2	2	7
Fluctuating value assets	5	3	9	5	6	6	7
Real estate	1	*	1	*	*	1	1
Common stock	4	2	5	2	7	4	5
Other fluctuating value assets	1	1	2	1	1	2	1
Don't know; not ascertained	2	2	1	2	2	2	2
Number of families	(1104)	(275)	(322)	(133)	(135)	(191)	(338)

1/ The question was: "In what form do you have it--an endowment policy, savings, bonds, a savings account, corporate stock, or what?"

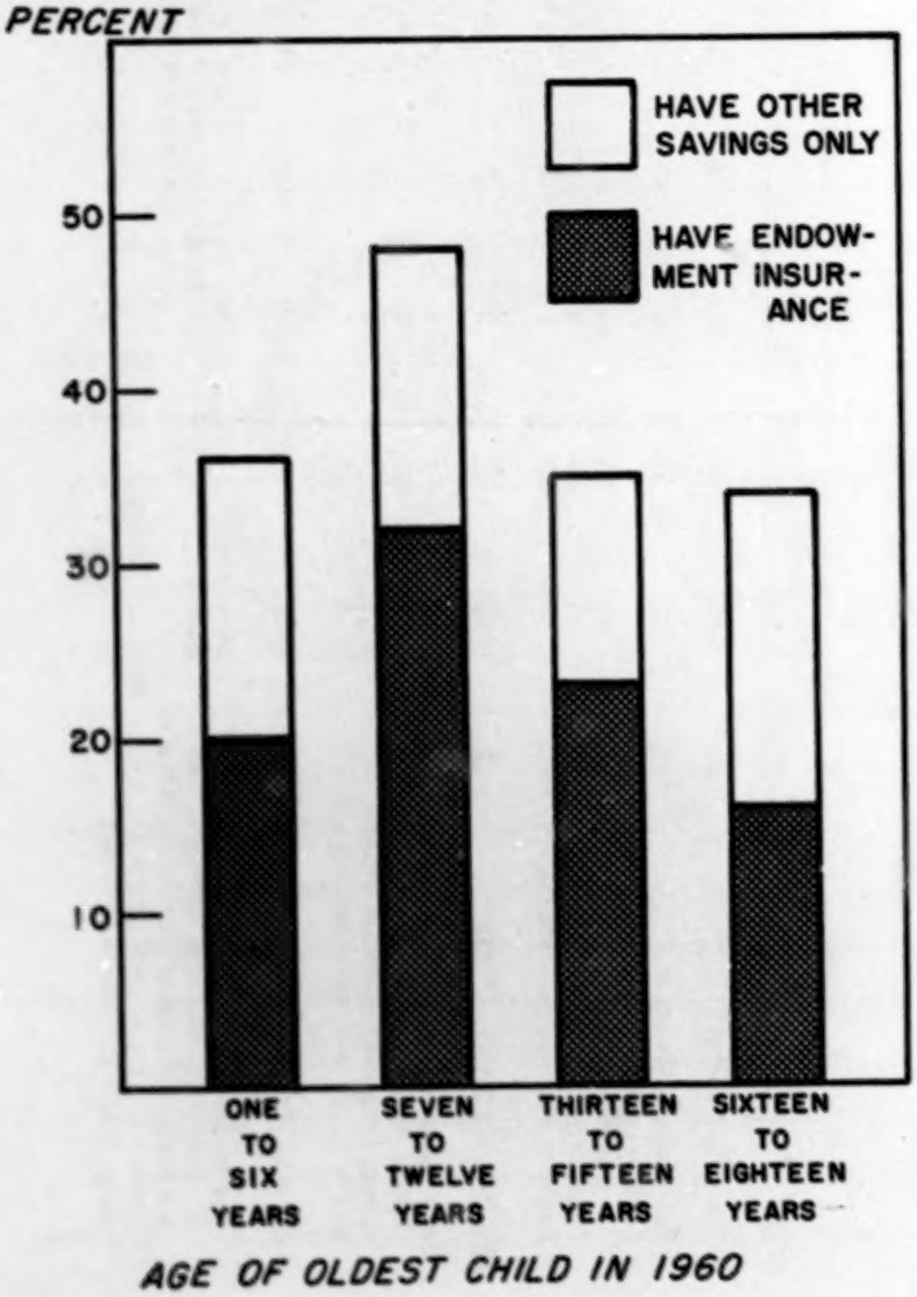
2/ Detail will not add to totals since families might keep funds in several forms.

3/ The "actual" column is based on data for families who have a child in college now or have had a child in college since 1955

* Less than 0.5 percent.

7

Percent of Families Who Expect to Send Children to College Who Report They Now Have Money Saved Specially for Education



who have money set aside in the form of endowment insurance.

The data in this table suggest that there has been some shift in the past ten years also from savings accounts or government bonds to endowment insurance by parents who are setting aside funds to pay for the education of their children. Of those who have had children in college recently, only 12 percent had endowment insurance. This proportion is much smaller than the 32 percent observed for those with the oldest child now aged 7 to 12. It is also smaller than the 20 percent or so observed for those with oldest child aged 1 to 6, or 13 to 15. There seems little question that parents are now making more adequate provision for the future than did the parents of children who have recently been in college.

The proportions who have set aside money in the form of savings accounts or government bonds have not increased in this same manner. The proportion who have money in these forms which they reported to the interviewers is slightly smaller for those with children aged 7 to 15 than for those who have had children in college recently. It seems reasonable to suppose that this proportion will rise somewhat as these families come nearer to the need for this money, but there is no indication of the spectacular increase shown in endowment insurance.

Those parents with children now aged 16 to 18 who expect them to enter college do not appear to be particularly well off in the matter of funds set aside in savings accounts or government bonds. The data rest on a relatively small sample but at least suggest that this proportion is no larger and perhaps smaller than it was for those who have had children in college recently.

To set aside money in the form of common stock may be somewhat more frequent for parents whose children are now below college age than it was for parents whose children have been in college recently. The proportion of parents who have money set aside in this form, however, remains small, on the order of one family out of 20.

Parents who have set money aside for education may be regarded as falling into two groups of about equal size, those with money in endowment insurance, and those who have the money in other forms. Whether parents plan to send their children to college and whether they have money set aside for the purpose depends on the socio-economic characteristics of the family. Within the group who do have money set aside, it may be asked, are there any differences in socio-economic characteristics which are associated with whether or not the family has endowment insurance? A set of tables has been prepared to explore this question. These tables are not reproduced here. They show that income, the education of the family head, and the race of the family make little or no difference in whether the money is in endowment insurance or in other forms. No doubt a larger sample of families with money set aside and more extensive questioning on the subject would reveal differences in investment preferences but the data suggest that these differences would not be large.

The main conclusion of this section, then, is that the parents of future college students are likely to be better prepared financially to pay for part of their children's college education than the parents of the recent college students. The improvement is especially noticeable in the increase in the proportion who have taken out endowment insurance. It should be kept in mind that the experience of the parents whose children have been in college recently was one of considerable financial difficulty in many cases. There was room for substantial improvement. Some improvement at least has been taking place.

B. Other Financial Planning

While the most direct action which people can take at the present time to help finance the college education of their children in the future is to save money, it is also possible that parents may formulate plans for financing their children's education in other ways. The remaining section of this chapter is devoted to a discussion of these other aspects of people's plans for financing the college education of their children.

In the first place, people may have given some thought to the magnitude of the financial outlay which will be required. One important determinant of the size of that outlay, as has been shown in Chapter II, is whether or not the student will live at home. Parents of future students were asked whether they think their children will go away to college or will live at home. The results of answers to this question are shown in Table 34, which distinguishes the families according to the age of the oldest child. As might be expected, the proportion that have given no thought to this question or did not answer it at all falls as the age of the oldest child increases. There is a substantial group of parents of children of all ages who expect the child to live at home. Roughtly 40 to 50 percent of the parents expect that their children will live at home during all or part of their college education. There does not seem to be any particular relation between this expectation and the age of the child.

Another dimension of the cost of attending college, which was discussed in Chapter II, is the difference between the cost of attending a publicly supported and a privately supported institution. The proportion of parents who expect their children to attend these different types of institutions is shown in Table 35. Again, as might be expected, the proportion who don't know the answer to this question or do not supply an answer tends to fall somewhat with the increasing age of the oldest child. It is clear from the table that the majority of parents expect that their children will attend a city or state institution. Approximately three out of ten of those whose oldest child is aged 7 or above expect that the child will attend a private institution. It is possible, of course, for different children in a family to attend different types of colleges or for one child to attend different types of

TABLE 34: Relation Between Whether Parents Expect Children Will Go Away to College or Live at Home and Age of Oldest Child
(percentage distribution of families with a child not yet in college who has a chance to attend)

	Plans						Actual
		Age of Oldest Child					
Residence 1/	All Families	1 - 6	7 - 12	13 - 15	16 - 18	Over 18	All Families 3/
At college	54	54	55	61	62	53	31
At home	40	37	44	47	36	47	66
Don't know; not ascertained	19	22	17	13	11	10	3
Total	100 2/	100	100	100	100	100	100
Number of families	(1104)	(275)	(322)	(133)	(135)	(191)	(274)

1/ The question was: "Do you think your children will go away to college, or will they live at home, or both?"

2/ Detail will not add to total since children in the family may live both at college and at home.

3/ The "actual" column is based on data for children in college at the time of interview.

TABLE 35: Relation Between Type of College Parents Expect Children Will Attend and Age of Oldest Child
(percentage distribution of families with a child not yet in college who has a chance to attend)

Type of College 1/	Plans						Actual
		Age of Oldest Child					
	All Families	1 - 6	7 - 12	13 - 15	16 - 18	Over 18	All Families 3/
City-supported	10	15	19	13	17	10	7
State-supported	48	51	58	61	56	52	48
Private and denominational	22	25	32	23	27	30	38
Don't know; not ascertained	26	28	22	20	18	21	7
Total	100 2/	100	100	100	100	100	100
Number of families	(1104)	(275)	(322)	(133)	(135)	(191)	(274)

1/ The question was: "Do you think any of your children will be going to a state-supported, city-supported or private college?"
2/ Detail will not add to total since children in family may attend more than one type of college.
3/ The "actual" column is based on data for children in college at the time of interview.

colleges during his college career. The main impression that the table reveals is that a very substantial proportion of the population expect their children to be educated at a publicly supported institution.

From the parents' point of view an important question is the extent to which they can rely on sources of funds outside the immediate family. Table 36 shows the plans which they have in this respect. It indicates that only a rather small proportion of parents expect any help from inheritance, gifts, or scholarships. The level of expectations which parents have seems to correspond reasonably closely to the actual experience of those families who have had children in college recently.

Few parents expect to borrow. Only about 3 percent indicate that they are planning to borrow money for educational purposes (Table 37). Such borrowing seems to be regarded as not a normal thing to do.

To what extent do parents expect to rely on additional work by family members other than the students to help pay for the education of the children? As discussed earlier, in roughly a quarter of the families with children in college recently, one or more of the family members other than the student did take a job or work more. This finding will come as no surprise to families with children who they expect to send to college. About 20 to 25 percent of the families expect that one or more family members other than the student will take a job or work more. (Table 38)

TABLE 36: Relation Between Outside Sources of Funds Expected by Parents and Age of Oldest Child
(percentage distribution of families with a child not yet in college who has a chance to attend)

Source of Funds	Plans						Actual
		Age of Oldest Child					
	All Families	1 - 6	7 - 12	13 - 15	16 - 18	Over 18	All Families 2/
Inheritance or gift	3	4	2	6	2	3	8
G.I. Bill	*	*	*	*	1	1	7
Scholarships	7	4	7	12	11	8	8 3/
Don't know; not ascertained	7	4	2	4	2	2	5
No mention of any of these sources	83	89	89	79	84	86	74
Total	100 1/	100	100	100	100	100	100
Number of families	(1104)	(275)	(322)	(133)	(135)	(191)	(338)

1/ Detail will not add to total since families might receive funds from several of these sources.
2/ The "actual" column is based on data for families who have a child in college now or have had a child in college since 1955. Compare Table 13.
3/ As shown in Table 5 about 25 percent of students now in college are reported to receive some scholarship assistance. See textual discussion of Table 13.

TABLE 37: Planned Borrowing Reported by Parents
(percentage distribution of families with a child not yet in college who has a chance to attend)

Borrowing [2]	Plans	Actual [1]
Borrowing by the family	3	10
Borrowing by family but not student	1	7
Borrowing by both family and student, or not clear by whom	2	3
No borrowing by the family	97	90
Total	100	100
Number of families	(1104)	(338)

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[1] The "actual" column is based on data for families who have a child in college now or have had a child in college since 1955. Compare Table 15.

[2] This table excludes borrowing clearly done by the students rather than his parents.

TABLE 38: Relation Between Expected Additional Work of Family Members Other Than Students as Reported by Parents and Age of Oldest Child (percentage distribution of families with a child not yet in college who has a chance to attend)

Additional Work by Family Members Other Than the Student	Plans All Families	Age of Oldest Child 1 - 6	7 - 12	13 - 15	16 - 18	Over 18	Actual All Families[2/]
Family members plan to work	19	25	19	24	15	17	27
Father plans to take another job or work more	1	1	1	*	1	2	6
Mother plans to take another job or work more	16	22	16	21	11	10	17
Both father and mother plan to work more	*	*	*	2	*	1	2
Other in family plan to work more	1	*	*	*	2	2	*
Family plans to work more, not clear who will be involved	1	2	2	1	1	2	2
No family members plan to work	72	70	75	70	84	79	71
Don't know; not ascertained	9	5	6	6	1	4	2
Total	100	100	100	100	100	100	100
Number of families	(1104)	(275)	(322)	(133)	(135)	(191)	(338)

1/ The question was: "Do you expect that any other member of the family will take a job to help pay for the childrens' college education?"

2/ The "Actual" column is based on data for families who have a child in college now or have had a child in college since 1955. Compare Table 9.

* Less than 0.5 percent.

This expectation refers ordinarily to the mother. It is not common for families to expect that the father will take an extra job. Indeed, only about one percent of families mentioned this expectation. This result suggests that this expedient, like borrowing, may be something that people do not plan in advance but adopt as a way out of a difficult financial situation. For the mother to work when the children go to school seems to be expected in advance and hence, to represent an increasingly common and accepted pattern of behavior.

People may also expect that the student will work and earn some of his support. As shown in Table 39, almost all parents reply in the affirmative when asked if they expect the children to help pay their own way from part-time or summer jobs. But the parents seem to have a conservative idea of the financial importance that these jobs are likely to have. Most parents either have no clear notion as to how much the children will earn, or expect that it will be a rather small part of the total cost of college, perhaps 20 percent. As shown in previous analysis of actual experience, 20 percent is not an unreasonable estimate of what many students are able to earn.

In summary, parents of young children seem to be making better financial provision for their college education now than was being made by parents ten or twenty years ago. The increase in the proportion with endowment insurance is especially noticeable.

TABLE 39: Relation Between Percent of Cost of College Education Which Children are Expected by Parents to Pay and Age of Oldest Child
(percentage distribution of families with a child not yet in college who has a chance to attend)

Student Earnings	All Families	Age of Oldest Child 1 - 6	7 - 12	13 - 15	16 - 18	Over 18
Expect student will work1/	82	81	85	92	89	87
Percent student will earn: 2/						
None	5	4	6	4	3	7
20%	46	49	53	38	42	39
40%	15	14	12	24	18	14
60%	8	7	6	10	5	12
80%	3	2	2	3	7	5
All	3	*	1	*	5	8
Not clear how much; don't know; not ascertained	20	24	20	21	20	15
Do not expect student will work	9	8	10	7	10	10
Don't know; not ascertained	9	11	5	1	1	3
Total	100	100	100	100	100	100
Number of families	(1104)	(275)	(322)	(133)	(135)	(191)

1/ The question was: "Do you expect your children will help pay their own way from part-time or summer jobs before they go to college or while they are in college?"

2/ The question was: "What percent of the cost of their education would you expect might come from these jobs--would it be nearer 0%, 20%, 40%, 60%, 80%, or 100%?"

* Less than 0.5 percent.

It is not unusual for women to plan to take a job to help meet the cost of college. Few families, however, plan to have the husband take on more work, and few plan to borrow money to finance the education of their children.

V. The Level of Education Attained or Planned For Different Cohorts

From the point of view of people interested in education, or in planning education facilities, a crucial question is what educational level is attained by successive generations of young people. This chapter attempts to bring together what has been learned about this question from interviewing parents. Interviews with parents offer advantages in that they permit collection of data concerning the characteristics of the family unit in which the child has grown up. In particular, information about the income of the family unit and about the education of the parents can be obtained. Interviews with parents, however, are not ideal for obtaining information about the intellectual ability and scholastic accomplishments of children, nor are they well adapted to obtaining information about the characteristics of the schools which they have attended. The analysis reported in this chapter necessarily reflects both the advantages and disadvantages of approaching the problem from interviews with parents.

In discussions of the education of children it is common to refer to children who are members of a particular age group at a certain time. This approach is natural, but it tends to shift attention away from a group as a unit passing from age level to age level through time. To focus attention on the history of a group born in the same period, we here follow the demographers' usage of referring to an age group as a cohort.

This chapter is divided into two parts. In the first, a comparison is made among different cohorts as to the educational status of individuals from different socio-economic groups. The second part is devoted to analysis of the factors which influence the level of education attained for those whose education is complete and the level planned for those who are still in school.

A. A Comparison of the Educational Status of Different Cohorts

The educational status of children of different age groups, or cohorts, in 1960 is summarized in Table 40. For those aged 1 to 9 years in 1960, the information about educational status is entirely information about the plans which parents now have for their children. For those aged 10 to 14 years, the information is almost entirely of the same sort, but 0.2 percent of the children had completed their education according to their parents' report. At the other end of the age distribution, those aged 30 to 39 years in 1960, the information consists almost entirely of reports of the level of education which had been attained by individuals before they completed their attendance at school. Even at this level, however, 0.4 percent of the individuals expected to attain further education, and 1.8 percent were actually attending a college or university at the time of interview. For the large group of individuals between the ages of 15 and 29, information about

TABLE 40: Plans to Attend College and College Attendance of Children Within Various Age Groups in 1960 as Reported by Their Parents
(percentage distribution of children)

	Age of Child in 1960					
	1-9	10-14	15-17	18-19	20-19	20-29
Educational Status	1951-1959	1946-1950	1943-1945	1941-1942	1931-1940	1921-1930
Education complete						
Did not finish high school	*	*	9	22	29	35
High school graduate	*	*	1	24	41	40
Attended college	*	*	*	2	11	11
College graduate	*	*	*	*	10	12
Education incomplete						
Expects not to finish high school	1	2	3	2	*	*
Expects to graduate from H.S.	26	30	33	9	*	*
Expects to attend college	10	11	9	1	*	*
Certain to go	2	1	3	*	*	*
Fair chance to go	4	6	4	1	*	*
Some chance to go	*	*	*	*	*	*
Slight chance; not ascertained	4	4	2	*	*	*
Expects to graduate from college	63	57	44	13	*	*
Certain to go	26	25	24	8	*	*
Fair chance to go	30	24	13	3	*	*
Some chance to go	1	*	*	*	*	*
Slight chance; not ascertained	6	8	7	2	*	*
Now attending college	*	*	1	27	9	2
Total	100	100	100	100	100	100
Number of children	(1631)	(856)	(473)	(217)	(931)	(754)

* Less than 0.5 percent.

educational accomplishment is a mixture of the reports of the level actually attained for those who have completed their education and of the reports of expectations for those whose education is incomplete.

The data in Table 40 may be compared with estimates made by the Census of the educational attainment of different cohorts (See Graph 8.) [1] The estimate in Table 40 is that in 1960, 23 percent of the cohorts of 1921-1930 had attended college. If those now attending are taken into account, 30 percent of the cohorts of 1931-1940 have attended. These proportions are substantially higher than those which would be suggested by a study of the data from the 1950 Census and the projections made in 1957 from the Current Population Surveys. It is not possible to reconcile the two sets of figures without careful investigation of differences in sample design and in the questions asked. But the comparison does suggest either that the Census estimates may be too low, or that the estimates from the present survey may be too high, or both. Comparisons with data from the 1960 Census will be particularly relevant when they become available.

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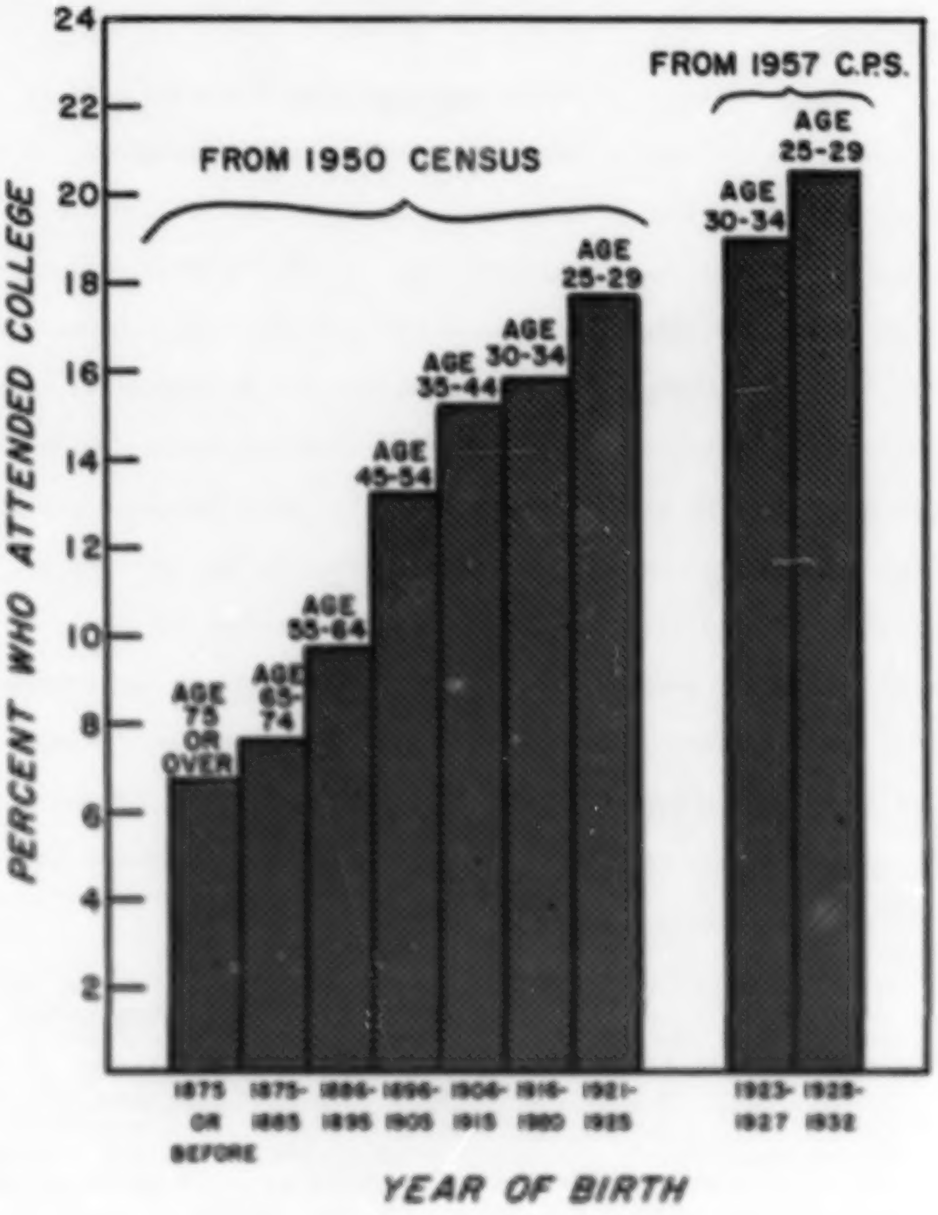
[1] Comparisons are also possible between these estimates and those obtained in two other studies: *Parents' College Plans Study*, conducted by Elmo Roper and Associates for the Education Program of the Ford Foundation, and *The Public's Picture of Higher Education in the State of Michigan: Information, Evaluation, and Enrollment Plans*, the third report of a statewide survey conducted by the Survey Research Center for the Association of Governing Boards and Presidents of State Universities and Colleges of Michigan, June 1960. The results obtained in these surveys are broadly consistent with those reported here, due allowance being made for differences in sampling and questionnaire construction. In particular the surveys all show that a high proportion of parents of young children expect the children to attend college.

8

Census Estimates of Educational Attainment of Different Cohorts



From the point of view of the analyst, it is perhaps unfortunate that for the most important age groups it is necessary to rely so heavily on plans or expectations. Expectations are likely to include unrealistic hopes.

But even granted an element of unreality or wishful thinking, these expectations should be given due weight. Many hopes bloom, especially in a period of economic prosperity, and the mere existence of the hopes is in itself of importance in understanding how people feel about higher education. Some attempt to separate the more realistic from the less realistic plans was made by asking people how certain they were that plans to attend college would be carried out. The results of these questions are shown in Table 40.

If parents actually were able to carry out for their children the plans which they have formed, the results would be dramatic. Of children aged 1 to 9, three-fourths are expected by their parents to attend college. Ten percent of the children are expected merely to attend and 63 percent to graduate. The parents feel that 26 percent (of the 63 percent) are "certain to go" to college, leaving some uncertainty about the remaining 47 percent. The parents of children aged 10 to 14 expect that 68 percent will attend college. Even of those aged 15 to 17 years in 1960, more than half are expected by their parents to attend a college or university.

The great change seems to come at the time when children are just entering college if they are to attend. Of those aged 18 to 19, about 4 out of 10 (43 percent) either are actually attending college, have attended, or are expected by their parents to attend. Of those aged 20 to 29, about 30 percent either have attended college or are attending at the present time. From 68 percent of those aged under 14 to 30 percent of those aged over 20 is a sharp decline.

From the point of view of forecasting enrollments, the vital question is whether the parents of the younger children will be able to translate these expectations into reality. As was discussed in the previous chapter, this total group of parents is making financial preparations which appear to be as good as those which were made by the parents of the children who recently have completed college. It is possible to infer, therefore, either that the parents of the next groups of college students will be better prepared financially, or that the proportion of the coming cohorts who enter college will be larger than the proportion found of those now aged 20 to 29.

Other research has shown that high school seniors who say they plan to attend college do not all carry out their plans. For example, Stroup and Andrew conducted a study of 12,706 high school seniors in the state of Arkansas in 1957. Of the men students, 50.7 percent planned to go to college. Follow-up procedures for the college-planning men indicated that 30.4 percent actually enrolled in a college the next fall. (The follow-up involved checking with college registrars. Some of the students who went to out-of-state colleges may have been missed if they did not go to the college which they planned to attend at the time when they answered the questionnaire.) Of the women, 39.1 percent planned to enroll, and of these 22.4 percent actually did enroll, while 16.7 percent did not. Thus, slightly over 40 percent of those who planned to go to college failed to do so. Approximately 2 percent of high school seniors did not plan to go to college but did enroll. 1/

The proportion of stated plans which go unfulfilled may be expected to vary depending on such factors as the nature of the questions asked and the time when they are asked. 2/

1/ Francis Stroup and Dean C. Andrew, *Barriers to College Attendance*, Southern State College, Magnolia, Arkansas, 1959.

2/ The question used by Stroup and Andrew was as follows: "Questions 29 through 37 concern your plans for the next year (1957-1958). Check the *one plan* you are now most seriously considering:

29. Get a job
* * *
30. Work for parents
* * *
31. Go to college
If yes, check the college you plan to attend:
* * *
32. Go to trade school
* * *
33. Go to business school
* * *
34. Go to other school
* * *
35. Do postgraduate work in high school
36. Enter the military service
37. Other"

It would be rash to apply the 40 percent loss factor from a study of high school seniors in Arkansas to a study of parents of children under 9 years of age over the entire country. That stated plans to attend college cannot be taken at face value should be borne in mind during this discussion. Nevertheless parental expectations warrant study as an expression of stae of mind at the time of interview.

Differences in plans may be observed from one segment of the population to another. These differences may be compared to differences in actual educational attainment of older individuals in these segments of the population. The two-way tabulations relating level of education to various independent variables which follow may serve as introduction to a multivariate analysis presented below.

From the economic point of view, one would expect that a variable both in the formation and in the execution of peoples' plans would be the level of family income. One would prefer to have complete information about the income of the family for all the years up to and including the year in which the education of its children was completed. The information which is available, unfortunately, is the income of the family in only one year, 1959. Income in that year, however, can be taken as a rough estimate of the level of income of the family in the years in which the decisions as to the childrens' education were being made.

For those aged 30 to 39 in 1960 the income of their parents in 1959 has a rather indirect connection with the level of education which they had attained some ten or twenty years earlier. For those aged 18 or 19 in 1959, however, the level of the family income in that year presumably would be of direct importance.

The relation between family income in 1959 and the actual or expected college education of children of different ages is shown in Table 41 and in Graph 9. The form of Table 41 is similar to that used in several succeeding tables and requires a word of explanation. The numbers in each cell of the table indicate the percent of children in that cell who expect to attend college or who have attended college. The numbers in parentheses are the total number of children in the sample for that cell. In estimating these proportions the "not ascertained" cases have been distributed in the same proportion as those for whom reports are available.

The first impression one gains from this table is that income is a powerful variable in determining both plans to attend college and actual attendance. As one reads across the first row, for example, the proportion of children who are expected to attend college rises with income from 39 percent of those under $3000 to 47 percent of children from families with incomes from $3000 to $4999, 80 percent from families with incomes from $5000 to $7499, 90 percent of children from families with incomes of $7500 to $9999, and 95 percent of children from families with incomes of $10,000 or above. These data have been plotted in the top line

TABLE 41: Relation Between Actual or Expected College Attendance and Family Income Within Various Age Groups in 1960 (percentage of children)

Age of Child in 1960	Actual or Expected College Attendance	All Children 1/	Family Income Under $3000	$3000 -4999	$5000 -7499	$7500 -9999	$10,000 and Over
1 - 9	Expect to attend	73 (1631)	39 (267)	67 (422)	83 (562)	90 (192)	95 (149)
10-14	Expect to attend	68 (856)	34 (116)	53 (200)	76 (294)	89 (117)	92 (103)
15-17	Expect to attend 2/	53 (473)	23 (84)	38 (86)	60 (149)	68 (59)	81 (69)
18-19	Attended or attending	30 (217)	5 (42)	29 (41)	23 (62)	* (23)	* (38)
	Expect to attend	13 (217)	14 (42)	12 (41)	14 (62)	* (23)	* (38)
20-29	Attended or attending	30 (931)	12 (245)	25 (207)	28 (233)	55 (91)	65 (102)
	Expect to attend	* (931)	* (245)	1 (207)	* (233)	* (91)	1 (102)
30-39	Attended	24 (754)	15 (313)	20 (161)	28 (119)	34 (64)	60 (57)

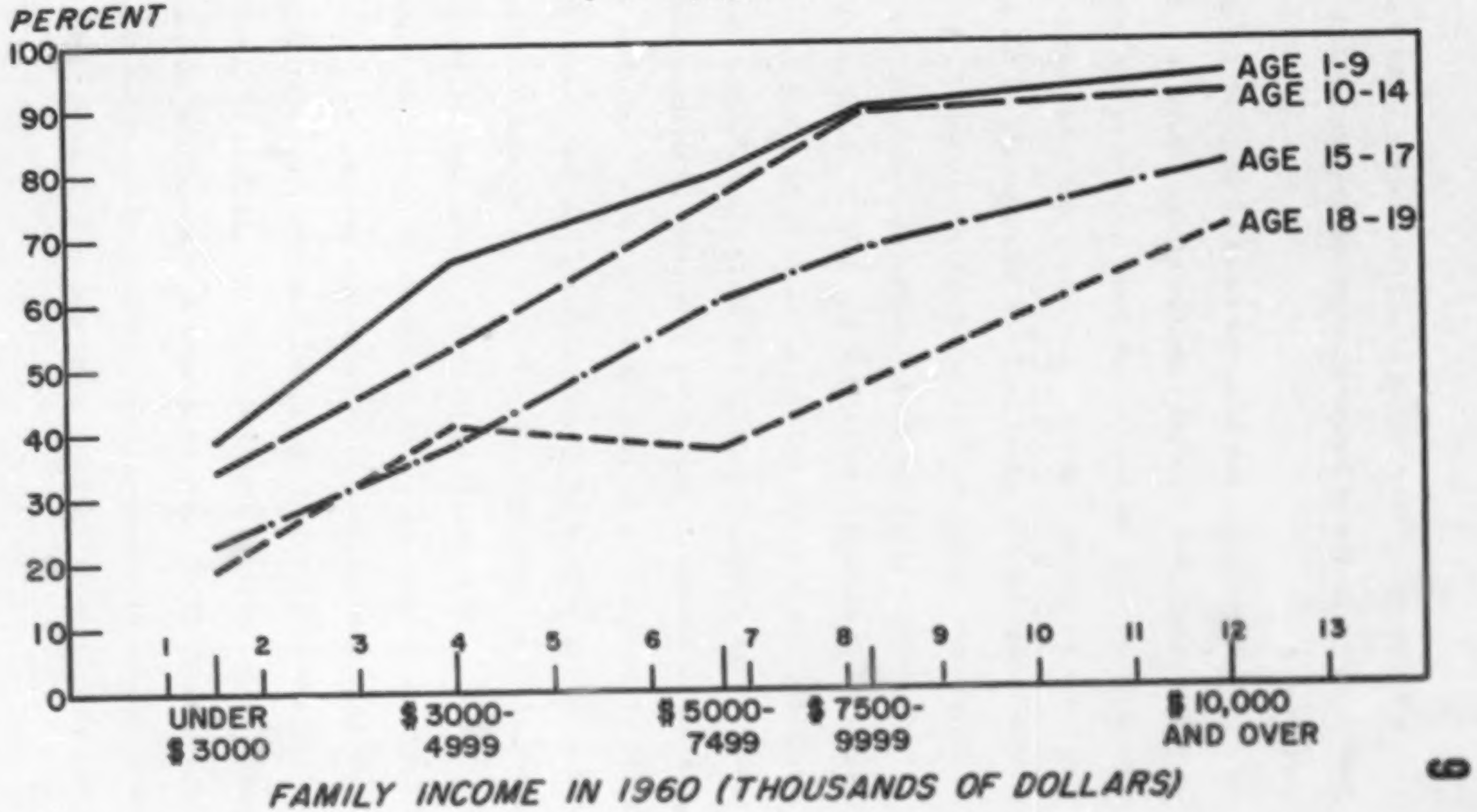
* Too few observations to percentagize or less than 0.5 percent.

1/ Number in parenthesis in each cell is the number of observations on which the percentage is based.

2/ Includes three children now in college.

Percent of Children Who Are Expected to Attend College or Have Attended

by Family Income



in the accompanying chart which also rises to the right showing the increase with income of the proportion who are expected to go to college.

The second conclusion from the study of Table 41 is similar to what was inferred from the previous table. There is a tendency for the proportion who are college bound to rise as one proceeds from older to younger cohorts. The puzzle mentioned before, is to what extent this expected increase in education as one proceeds to the younger age groups will be actually realized.

There is a third and more tenuous conclusion which may be drawn from these data. It is that the drop in college attendance from plans to actual accomplishment tends to be greatest in the middle income groups. Those in the upper income groups who plan to attend a college or university do attend. Something like 7 out of 10 of those now of college age in the income group over $10,000 are attending college or expect to do so. At this income level, 6 out of 10 of those aged 30 to 39 actually attended a college or university. Thus, in the upper income group, the decline from 95 percent of those aged 1 to 9 to about 70 percent of those aged 18 to 19 is a difference of 25 percentage points.

At the other end of the income distribution, relatively few people ever expect to attend college. Of children of parents with incomes under $3000, only 40 percent at the most are expected by their parents to attend college. In fact, about 20 percent of those in this group do attend a college or university. The difference between hope and fulfillment, then, is roughly 20 percentage points.

It is near the middle of the income distribution, in the range $5000 to $9999, where the difference between expectation and attainment may be the greatest. Of the children now aged 1 to 9 from families receiving $5000 to $7499, 80 percent are expected to attend college. Of those in this group now aged 18 to 19, less than 40 percent are attending or expect to attend. The difference is 40 percentage points, roughly double that of either high or low income groups. If one examines the income group $7500 to $9999, the same picture emerges. About 9 out of 10 of those aged less than 14 are expected by their parents to attend college. Of those aged 18 to 19 something like 50 percent in fact are attending college. Again, the implied difference is about 40 percentage points. Whether the expectations of parents of children now young will undergo such a drastic revision downward in the future remains to be seen.

A somewhat similar way of looking at the problem is to relate the college attendance of the children to the education of the head of the family. This approach is taken in Table 42. It has the merit that the head of a family usually has completed his education by the time he has children, and, thereafter, his educational attainment will not change--no matter how his income fluctuates. Since the individuals with high incomes ordinarily are those with more education, one would expect to find the same general relation-

TABLE 42: Relation Between Actual or Expected College Attendance and Education of Head Within Various Age Groups in 1960 (percentage of children)

Age of Child in 1960	Actual or Expected College Attendance	All Children 1/	Education of Head: Did not Complete High School	High School Graduate	Attended College	College Graduate
1 - 9	Expect to attend	73 (1631)	39 (784)	76 (437)	91 (160)	99 (233)
10-14	Expect to attend	68 (856)	52 (433)	79 (260)	96 (86)	94 (96)
15-17	Expect to attend 2/	53 (473)	38 (284)	68 (116)	81 (44)	83 (62)
18-19	Attended or attending	30 (217)	12 (130)	* (36)	* (30)	* (17)
	Expect to attend	13 (217)	12 (130)	* (36)	* (30)	* (17)
20-29	Attended or attending	30 (931)	19 (632)	42 (170)	63 (65)	85 (53)
	Expect to attend	* (931)	* (632)	1 (170)	* (65)	* (53)
30-39	Attended	24 (754)	17 (376)	41 (93)	60 (50)	* (23)

* Too few observations to percentagize.

1/ Number in parentheses in each cell is the number of observations on which the percentage is based.

2/ Includes three children now in college.

ships in Table 42 that appear in Table 41. The results confirm this expectation. Perhaps the most striking result in Table 42 is the very high proportion of children of college graduates who are expected by their parents to attend college. Nearly every child of a college graduate is expected to follow in the parental footsteps. Even if the head of the family merely attended college, 9 out of 10 of the children are expected likewise to attend.

It is also remarkable what a high proportion of parents who did not themselves complete high school expect their children to attend college. Of children aged 1 to 9 in 1960 whose fathers did not finish high school, 39 percent are expected to attend college. Similarly, of the children 10 to 14 whose fathers did not complete high school, 32 percent are expected to attend college.

Another measure of socio-economic status which is related to income and to education is the occupation of the head of the family (Table 43). As one would expect from the previous tables, parents in the lower status occupations are less likely to expect their children to attend college than parents in the high status occupations. If the head of the family is a professional or technical worker, the children are almost invariably expected to attend a college or university. The same is true in the families of managerial and self-employed workers.

The actual record of college attendance for children from these occupational backgrounds who are aged 18 to 19 or over 20 in 1960 is also impressive.

TABLE 43: Relation Between Actual or Expected College Attendance and Occupation of Head Within Various Age Groups in 1960 (percentage of children)

Age of Child in 1960	Actual or Expected College Attendance	All Children 2/	Occupation of Head: Professional, Technical	Managerial, Self-Employed	Clerical, Sales	Craftsmen, Foremen, Operatives	Laborers	Service Workers	Farmers
1 - 9	Expect to attend	73 (1631)	95 (200)	90 (182)	84 (186)	71 (351)	52 (154)	62 (123)	30 (101)
10-14	Expect to attend	68 (856)	92 (82)	88 (140)	80 (91)	65 (286)	43 (72)	65 (37)	52 (67)
15-17	Expect to attend	53 (473)	87 (47)	71 (66)	* (39)	47 (163)	* (38)	*	49 (64)
18-19	Attended or attending	30 (217)	* (16)	* (35)	* (21)	17 (70)	* (19)	* (13)	* (25)
	Expect to attend	13 (217)	* (16)	* (35)	* (21)	13 (70)	* (19)	* (13)	* (25)
20-29	Attended or attending	30 (931)	70 (60)	33 (123)	52 (77)	20 (262)	9 (75)	22 (68)	21 (112)
	Expect to attend	* (931)	* (60)	* (123)	* (77)	* (262)	* (75)	1 (68)	* (112)
30-39	Attended	26 (754)	*	44 (82)	38 (67)	18 (125)	13 (67)	30 (49)	23 (69)

* Too few observations to percentagize.

1/ Number in parentheses in each cell is the number of observations on which the percentage is based.

2/ Includes three children now in college.

For the blue collar workers, the proportion of children attending college is lower but none the less substantial. Of those children of blue collar workers aged 18 to 19 in 1960, about three out of ten were in fact attending college or expected to attend. If the expectations of their parents are borne out, more than twice that many of the younger children of this occupation group will be attending college in the future.

The final table in this series relates actual or expected college attendance to the race of the head of the family. As shown in Table 44, the proportion of children of negro families who are expected to attend college by their parents is lower than that for white families. In view of the differences in income, education, and occupation between whites and negroes, this result is not surprising. If anything, it is remarkable that the differences are so small. For example, of negro children aged 1 to 9 in 1960, 68 percent are expected to attend college by their parents!

The data on members of other racial groups, that is individuals who are neither white nor negro, are very sparse. There are enough children aged 1 to 9 in the sample, however, to permit an estimate of the proportion of this age group of the other races who are expected by their parents to attend college. The proportion is very low, 30 percent, in contrast to 68 percent of the negroes and 75 percent of the white children. The "other" racial group includes, for example, recent immigrants from Puerto Rico, who are found in substantial numbers in New York City, and Mexicans

TABLE 44: Relation Between Actual or Expected College Attendance and Race of Head Within Various Age Groups in 1960 (percentage of children)

Age of Child in 1960	Actual or Expected College Attendance	All Children 1/	Race of Head		
			White	Negro	Other
1 - 9	Expect to attend college	73 (1631)	75 (1360)	68 (174)	30 (70)
10-14	Expect to attend college	68 (856)	71 (760)	32 (77)	* (23)
15-17	Expect to attend college 2/	53 (473)	55 (408)	28 (47)	* (12)
18-19	Attended or attending college	30 (217)	31 (181)	* (26)	* (3)
	Expect to attend college	13 (217)	12 (181)	* (26)	* (3)
20-29	Attended or attending college	30 (931)	31 (821)	18 (76)	* (10)
	Expect to attend college	* (931)	* (821)	* (76)	* (10)
30-39	Attended college	24 (754)	25 (692)	10 (48)	* (2)

* Too few observations to percentagize.
1/ Number in parentheses in each cell is the number of observations on which the percentage is based.
2/ Includes three children now in college.

who have migrated into parts of the Southwest and elsewhere in the United States. These groups, in contrast to the negroes, are recent arrivals into the United States and have difficulties of language and other problems of adjustment to the American culture. The imperfect acculturation of the parents may be the reason why small proportions of their children are expected to attend a college or university.

From a social point of view it may be argued that the level of education which children receive should depend primarily on their intellectual ability rather than on the status of their parents. It is not easy to obtain accurate information from parents about the ability of their children. Nevertheless, this variable is so important that in this investigation the following question was asked: "How do his (or her) marks compare with others in his (or her) class, are they below average, about average, above average, or at the top of the class?"

This question may be taken as a rough way of sorting out children according to their parents' estimates of their ability and performance in school. The question was asked only about children who are now in school so that no data are available on the estimated intellectual capacity or performance of those individuals whose education is complete.

In Table 45 the relation between the child's grades in school as reported by the parents and the parents' statements about the expected college attendance of the child is shown. As might be

TABLE 45: Relation Between Parents' Certainty of Child's Attending College and Parent's Report of Child's Grade Within Various Age Groups of Children in 1960 Whose Parents Expect Them to Attend College (percentage distribution of children)

Age of Child in 1960	Degree of Certainty of College Attendance 2/	All Children	Child's Grades 1/ Top of Class	Above Average	Average
1 - 9	Certain to go	40	68	52	31
	Fair chance to go	49	32	40	51
	Slight chance to go	11	*	8	18
	Total	100	100	100	100
	Number of children	(1129)	(41)	(149)	(253)
10-14	Certain to go	40	62	52	29
	Fair chance to go	45	38	41	49
	Slight chance to go	15	*	7	22
	Total	100	100	100	100
	Number of children	(565)	(68)	(186)	(283)
15-17	Certain to go	52	*	68	41
	Fair chance to go	34	*	23	43
	Slight chance to go	14	*	9	16
	Total	100	100	100	100
	Number of children	(237)	(33)	(78)	(113)

* Less than 0.5 percent or too few observations to percentagize, i.e., less than 40.

1/ The question was: "How do his(or her)marks compare with others in his(or her) class, are they below average, about average, above average or at the top of the class?"

2/ The question was: "Would you say its certain he(or she)will go to college, there is a fair chance, or only a slight chance?"

expected--and as might be hoped--there is a correlation between the grades as reported by the parents and expectations concerning the child's attendance at college. Of those children who are reported by their parents to be at the top of the class, all are expected to attend college, though only about two-thirds are reported "certain to go". Of those children whose grades are reported by their parents as "average," about 80 percent are reported as expected to go to college. The proportion who have only a fair chance to go, however, is larger than the proportion who are certain to go from this group of students. This result is consistent with the findings obtained in other studies. Superior children actually are more likely to attain college than those of average or less than average intellectual performance.

In summary, the actual or expected education of children is related to family income, the education of the family head, the occupation of the head, race of family, age of the child, and the child's academic performance. All of these variables, however, are interrelated. Which are most important? How can their relative importance be measured? Such questions can be answered only by multivariate analysis of the type presented in the next section.

B. Factors Influencing Educational Attainment

In an analysis of the level of education attained by children, it is helpful to select one age group and investigate the variables which influence behavior in that age group. In this way differences among cohorts are held constant. In this way, also, variables such as family income in 1959 tend to have similar relevance for all the individuals being studied.

In selecting the cohorts to be studied, two conflicting criteria were taken into account. In the first place, in analysing completed education one would wish to have the youngest possible age group so that the decisions studied might be as recent as possible. On the other hand one would wish to have an age group old enough so that few of its members would be still in school. The age group 25 to 29 in 1960 was selected for analysis as a compromise between these conflicting criteria.

A similar problem arose in preparing the multivariate analysis of the expected level of education for children whose education is now incomplete. The narrower the group selected for investigation the more comparable would be its members. On the other hand, to define a very narrow group would be to restrict the size of the sample. The choice made was to estimate the regression for children who at the time of interview were in grades 9, 10, 11, and 12.

Do some factors make more difference in peoples' expectations than in their accomplishments? Are other variables more closely correlated with actual performance? To answer these questions it was desirable to use the same independent variables with each of the dependent variables being studied. It was possible to use exactly the same independent variables with one exception. As already noted, information about the academic performance of the students was obtained from a question asked concerning those children who were in school at the time of the study. Since no such question was asked about those whose education was complete, this variable could not be included in the analysis of factors associated with the level of education actually attained.

The independent variables selected for inclusion in the analysis are specified in Table 46. They are family income, education of the head, education of the wife, occupation of the head, whether or not the family lives in an outlying area, birth order of the child (whether this child was one of the first four or ranked fifth, sixth, or later), sex of the child, whether or not this is the oldest child, and the academic rank of the child as perceived by his parents. The method of scaling the variables is also shown in Table 46.

Attained education: The first calculations made are not presented here. In these calculations the independent variables and the dependent variables were defined as in Table 46 except that a variable for race was included. The first calculations were faulty from a technical point of view in that the "not ascertained cases" on the dependent variable were included in the regression analysis. This error was corrected in the second calculations.

The original calculations were sufficiently satisfactory, however, so they could be used for a study of the appropriateness of the definitions of the variables and the formulation of relationships. The method used may be described briefly as follows: The

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TABLE 46: Definitions of Variables for the Regression Analyses of Both Attained and Expected Level of Formal Education

Variable	**Symbol**	**Range**	
Attained level of education	Y_1	1	if 1st grade or none
		2	if 2nd grade
		...	
		12	if high school
		11	if some high school plus vocational
		13	if college, 1st year
		14	if college, 2nd year
		15	if college, 3rd year
		16	if college, 4th year
		18	if professional school
Expected level of education	Y_2	1	if expects grade school only
		2	if expects some high school
		3	if expects complete high school
		5	if expects some college
		7	if expects complete college
		9	if expects professional school
Family income in 1959	X_1	0	if under $2,000
		1	if $2000 - 2999
		2	if $3000 - 3999
		3	if $4000 - 4999
		4	if $5000 - 5999
		5	if $6000 - 7499
		6	if $7500 - 9999
		7	if $10,000 - 14,999
		8	if $15,000 and over
		4	if not ascertained and white
		1	if not ascertained and non-white

continued

Table 46 (continued):

Variable	Symbol	Range	
Education of head	X_2	1	if grade school
		2	if some high school
		3	if complete high school
Education of wife	X_3	5	if attended college
		7	if has a college degree
		3	if not ascertained and white
		1	if not ascertained and non-white
Occupation of head	X_4	4	if professional, technical, managerial, official or proprietor
		3	if clerical or sales personnel
		2	if craftsman, foreman, operative, and members of armed forces
		1	if laborer, service worker
		2	if not ascertained and white
		1	if not ascertained and non-white
Outlying area	X_5	1	if lives in the central city of a metropolitan area or in its suburbs or in the adjacent areas
		0	if lives in outlying territory more than 50 miles from the central business district of the principal city in a metropolitan area
Late birth order	X_6	0	if first, second, third and fourth child
		5	if fifth child
		6	if sixth child and so forth

continued

Table 46 (continued):

Variable	Symbol	Range	
Sex of child	X_7	0	if son
		1	if daughter
Oldest child birth order	X_8	1	if first child
		0	otherwise
Perceived academic rank	X_9	1	if top of the class
		2	if above average
		3	if average
		4	if below average
		5	if bottom of the class

calculations were made on the I.B.M. 704 and the output of the program included, in addition to the regression equation for each interview in the sample, the predicted values from that equation, actual values, and the difference between actual and predicted values. It was easily possible, therefore, to relate the residuals from the predicting equation to the independent variables. Graphs showing this relation were made separately for each of the independent variables. This procedure yielded one result which seemed to require further study. The residuals for negroes showed a much higher dispersion than the residuals for whites. That is, the regression equation seemed to be more satisfactory for whites than for negroes.

This finding led to a decision to omit race from the list of variables which were included directly in the calculations and to make separate estimates of the regression equations for negroes and for whites.

The results of the second set of calculations justified this procedure. The equations for whites and non-whites (Table 47) do differ substantially. Since the sample of whites is much larger than the sample of non-whites, and the data for whites are correspondingly more reliable, it may be appropriate to consider first the results for the whites and then to compare them with the results for non-whites.

Of the independent variables listed in Table 46, as a first approximation four are related to the attained level of education

TABLE 47: Presentation of Regression Equations for Attained and Expected Level of Education

Regression #3 Attained level of education

3A. White

$$Y_1 = 9.33 + \underset{(.065)}{.175\,X_1} + \underset{(.087)}{.396\,X_2} + \underset{(.092)}{.448\,X_3} + \underset{(.241)}{.620\,X_8}$$

Standard error of Y: 2.24 1/ R = .52 n = 374

3B. Non-white

$$Y_1 = 1.72 + \underset{(.386)}{.752\,X_1} + \underset{(.84)}{2.320\,X_2} + \underset{(1.12)}{2.193\,X_3} + \underset{(1.30)}{2.654\,X_5}$$

Standard error of Y: 3.08 1/ R = .75 n = 33

Regression #4 Expected level of education

4A. White

(4A1)

$$Y_2 = 5.04 + \underset{(.052)}{.146\,X_1} + \underset{(.060)}{.147\,X_2} + \underset{(.067)}{.176\,X_3} + \underset{(.093)}{.178\,X_4}$$

$$- \underset{(.196)}{.464\,X_5} - \underset{(.168)}{.549\,X_7} + \underset{(.168)}{.372\,X_8} - \underset{(.117)}{.486\,X_9}$$

Standard error of Y: 1.75 1/ R = .51 n = 450

(4A2)

$$Y_2 = 5.56 + \underset{(.051)}{.166\,X_1} + \underset{(.051)}{.266\,X_2} - \underset{(.169)}{.630\,X_7} - \underset{(.118)}{.544\,X_9}$$

Standard error of Y: 1.78 1/ R = .47 n = 450

4B. Non-white

$$Y_2 = 2.53 + \underset{(.174)}{.416\,X_3} + \underset{(.265)}{.772\,X_4}$$

Standard error of Y: 1.70 1/ R = .62 n = 56

1/ By the standard error of Y is meant the standard deviation of residuals from the regression equation.

of whites aged 25 to 29. The four effective variables are X_1, family income in 1959; X_2, the education of the head; X_3, the education of the wife; and X_8, whether or not the child was the first child in the family. After these four have been taken into account the following variables have no effect: the occupation of the head, whether the family lives in an outlying area, whether this child was one of the last children in a family of five or more, and the sex of the child.

In analyzing results of regression analyses, it is common practice to accept as reliably different from zero coefficients equal to or larger than twice their own standard errors. In Table 47 the standard error of each coefficient is shown in parenthesis below the coefficient. If the analysis is based on a simple random sample, a coefficient as large as twice its standard error will appear by chance only five times out of a hundred trials. The present analysis, however, is based on a highly complex, clustered random sample whose properties are understood less completely than those of simple random samples.1/ A conservative approach, therefore, would be to require that a regression coefficient be equal to, say, three times its standard error before accepting it as reliably different from zero. With this criterion in mind, each of the four variables tentatively accepted as having some importance may be examined more closely.

1/ These complexities also arise in connection with regression #1 and #2. Since the number of observations is smaller for those equations, the effect of clustering is less likely to be serious.

Family income in 1959 does not seem to be a powerful variable in explaining attained level of education once the education of the parents is taken into account. The coefficient for X_1 in regression 3A is more than two times its standard error but not quite three times its standard error, hence, the variable must be regarded as marginal. The coefficient of .175 is small. It implies a difference of about one and a half years in the education attained by children from families with different incomes. That is, the attained level of education of the children in the family tends to rise by about one year as income increases from under $2000 to $7500 or over.

This result must be interpreted in the light of the fact that peoples' incomes tend to vary from year to year. The family income for 1959 of the parents of children aged 25 to 29 in 1960 is an imperfect measure of the family income of the parents when the children were completing their education at, say, ages 15 to 22.

The coefficient for X_2, the education of the head, is nearly five times its own standard error; there is no question of its statistical reliability. Also, the contribution of X_2 to the estimate of Y is substantial. Whether the head attended grade school or graduated from college makes a difference of about two years in the estimated number of years of formal education of the children even after the other variables in the expression are taken into account.

The coefficient for X_3, the education of the wife, is, if anything, slightly larger than that for the education of the husband. The coefficient is about equally reliable statistically. The implication of the coefficient is that the education of the wife makes a difference of about two and a half years in the estimated level of education of the child.

Thus, the level of the education of the child depends heavily both on the education of the husband and on the education of the wife. Of the variables investigated these two are the most important in estimating the attained level of education for their children now in the age group 25 to 29.

The fourth and final variable which seems to have an influence on the attained level of education is whether or not the child in question was the oldest child in the family. The coefficient for X_8 is .62, which is about two and one half times its own standard error. In view of the complexities of the sample design, therefore, the variable must be regarded as marginal. The contribution of this variable to the estimate of the dependent variable is relatively small. The coefficient indicates a prediction of about half a year more education if the child in question is the oldest child. The multiple correlation coefficient for equation 3A is $R = .52$ implying $R^2 = .27$. In other words, the equation explains about one-fourth of the observed variance.

The regression for non-whites is similar to that for whites with two exceptions. The same three socio-economic characteristics of the family appear as important: family income, education of the head, and education of the wife. Of the three, the only one which is as large as three times its own standard error, or nearly so, is X_2, the education of the head. Thus, the results for the non-whites are subject to more uncertainty than the coefficients for whites. This uncertainty arises primarily because the sample of non-whites is much smaller than the sample of whites. But the three variables seem to have larger coefficients for the non-whites than for the whites.

If it is true that the coefficients in the population are larger for negroes than for whites, then there are greater differences from one socio-economic group to another within the non-white population than within the white population. The education attained by non-white children depends more closely upon the education and income of their parents than the education attained by white children depends upon the income and education of their parents. This tentative result will be further discussed in connection with equation #4.

One additional variable appears to be important for non-whites only. It is X_5, whether or not the family lives in an outlying area. Outlying areas are places which are more than 50 miles from the business district at the center of the nearest metropolitan area. If the positive coefficient for X_5 is not the result of chance fluctuation, it indicates that colored people who live in the more centrally located areas are likely to obtain about two and one half more years education on the average than those who live in the outlying areas. There are many colored people in the South in rural regions where educational facilities are not outstanding. It would not be surprising to find these people receiving less education than urban negroes even if the other variables in the equation are taken into account.

Table 48 shows the contribution of each variable to estimates of the attained level of education from equation #3, while Table 49 shows examples of predictions from that equation.

In summary, for non-whites the actual level of education attained by those 25 to 29 whose education is complete definitely depends on the educational level of their parents. The evidence suggests that the income of the family while the children were being educated also was important, and that there is a tendency for the oldest child to receive somewhat more education than the others in the family.

Residuals from estimates of attained education: The educational level attained by any individual depends not only on the characteristics of the individual and his family but also on the educational facilities available to him. These facilities may vary from one region of the country to another. The present research was not designed for a study of the importance of the availability of educational facilities. It was possible, however, to estimate for each individual included in the regression analysis the difference between the number of years of education he attained and the level predicted from the equation. On the average, these residuals are

TABLE 48: Contributions of Individual Variable to Estimates of the Attained Level of Education Based on Regression Equation #3

Variable	Contribution to Estimate of Y		Value of
	(3A) White	(3B) Non-White	Independent Variable
	0	0	Under $2000
X_1 (family income)	.18	.75	$2000 - 2999
	.35	1.50	$3000 - 3999
	.53	2.26	$4000 - 4999
	.70	3.01	$5000 - 5999
	.88	3.76	$6000 - 7499
	1.05	4.51	$7500 - 9999
	1.23	5.26	$10,000 - 14,999
	1.44	6.02	over $15,000
X_2 (education of head)	.40	2.32	grade school
	.80	4.64	some high school
	1.20	6.96	complete high school
	2.00	11.60	some college
	2.80	16.24	college graduate
X_3 (education of wife)	.45	2.19	grade school
	.90	4.38	some high school
	1.34	6.58	complete high school
	2.24	10.97	some college
	3.14	15.35	college graduate
X_5 (outlying or not)	*	0	if living in outlying area
	*	2.65	if not
X_8 (oldest child birth order)	0	**	if not first child
	.62	**	if first child

* Variable X_5 is not useful in predictions for whites.

** Variable X_8 is not useful in predictions for non-whites.

TABLE 49: Estimates of the Attained Level of Education for Illustrative Values of Independent Variables

(3A) White

	Family Income	Education of Head	Education of Wife	Child's Birth Order	Estimates
Example 1	$4,000	high school	high school	first	college 1st year
Example 2	$8,000	high school	some college	first	college 2nd year
Example 3	$10,000	some college	high school	second	college 2nd year
Example 4	$10,000	college grad.	college grad.	second	college graduate

(3B) Non-white

	Family Income	Education of Head	Education of Wife	Outlying Area	Estimates
Example 1	$2,000	grade school	grade school	city	10th grade
Example 2	$4,000	some high S.	some high S.	outlying	1st year college
Example 3	$5,000	grade	grade	city	comple high school

necessarily zero, but for any individual the residual usually will not be zero, and it is also possible that the average residuals for sub-groups of the population may differ from zero.

The residuals from equation #3A are shown in Table 50 classified by the region of the country and the availability of institutions of higher education in the country in which the individual lives. The four regions are defined in terms of Census regions as follows: West--Mountain and Pacific states; North Central--East North Central and West North Central states; Northeast--New England and Middle Atlantic states plus Delaware; and South--South Atlantic exclusive of Delaware, East South Central, and West South Central. The availability of institutions of higher education was found for each of the 66 counties (or groups of counties) in the sample using data from the Education Directory, Higher Education, 1959-1960, published by the Office of Education.

The results indicate that the average level of education is lower in the South than elsewhere, even after taking into account the socio-economic variables in equation 3A. The difference is very approximately one year of formal education.

The evidence also indicates that, other things being equal, the average level of education is least where there is no institution of higher education in the county. Again, this result holds taking into account the socio-economic variables specified above. The difference is in the neighborhood of a year in the average number of years of formal education attained. The preceding statements are based on the variance analysis shown in Table 50A.

TABLE 50: Analysis of Residuals from Predictions of Attained Level of Education for Whites Aged 25-29 1/
(mean residuals expressed in years of formal education)

Availability of Institutions of Higher Education	Region West	North Central	North East	South	All Regions
None in the county	1.06 (11) 65.286	-.14 (51) 193.291	-.04 (6) 5.699	-1.55 (45) 314.450	-.58 (113) 662.641
Private institutions only in the county	.27 (8) 75.210	.34 (29) 87.683	.48 (25) 76.652	-1.34 (16) 129.197	.03 (78) 407.219
Public only or both public and private	.23 (24) 74.905	.54 (49) 176.740	.24 (53) 193.876	.31 (57) 259.476	.34 (183) 704.912
All degrees of availability	.45 (43) 86.253	.23 (129) 202.769	.30 (84) 126.439	-.62 (118) 297.589	.00 (374) 1836.4951

1/ The figures in each cell are laid out as follows:
Mean
Number of observations
sum of squares around mean

TABLE 50A: Variance Analysis of Residuals from Predictions of Attained Level of Education from Table 50

	Sum of Squares	Degrees of Freedom	Variance
Among row means (availability)	58.818	2	29.409
Among column means (region)	68.585	3	22.862
Interaction	56.625	6	9.438
Subtotal	184.028	11	
Within cell	1652.466	354	4.668

The significance of the interaction term between region and availability of educational facilities can be tested as follows:

$F = \frac{9.438}{4.668} = 2.02$, and $F_{.95}\ (6,354) = 2.10$.

The interaction is not large enough to be significant. It is now possible to test the significance of the regional effect and the facility effect respectively:

	Sum of Squares	Degrees of Freedom	Variance
Among row means	58.818	2	29.409
Among column means	68.585	3	22.862
Residual	1,709.091	360	4.747

Regional effect $F = \frac{22.862}{4.747} = 4.82$ $F_{95}\ (3,360) = 2.60$

Facility effect $F = \frac{29.409}{4.747} = 6.20$ $F_{95}\ (2,360) = 3.00$

Both main effects are significant.

Expected education: The results of the analysis of the expected level of education also appear in Table 47. Two equations are shown for whites. The first equation includes those variables from the list shown in Table 46 which proved to have coefficients equal to two times their standard errors. The second equation includes only variables which meet the strict criterion of a coefficient equal to three times its error. All variables as it turns out, have coefficients at least four times their errors in this expression. There are four of those highly reliable variables in the second equation: the income of the family, the education of the head of the family, the sex of the child, and the academic rank of the child as perceived by the parents. From a statistical point of view these four variables are associated with expected level of education beyond any reasonable doubt. From a common sense viewpoint, it is also reasonable that the finances of the family, the education of the head, the sex of the child, and his grades in school should influence his education.

The equation for whites which also includes those variables which are two times their standard errors adds the following variables: the education of the wife, the occupation of the head, whether the family lives in an outlying area, and whether this is the oldest child. Of the variables included in the original calculation, only X_6, late birth order, clearly has no effect on the expected level of education when the other variables are taken into account.

The dependent variable in the analysis of the expected level of education is not expressed in the same units as the dependent variable in the analysis of the attained level of education. That is, Y_2 varies from 1 to 9 depending upon the position which the children are expected to attain on the scale of educational attainment shown in Table 46, while Y_1 varies from 1 to 18 depending upon the estimated actual number of years of formal education which the child completed. The difference between the two variables arises from the difference between a precise count, which is characteristic of measures of actual attainment, and the vague way in which people form expectations about the level of education which their children will attain.

It is reassuring to find that income is on a firmer statistical basis in explaining expectations than in explaining the attained level of education. This result tends to confirm the interpretation mentioned earlier that income in 1959 is an imperfect measure of the economic position of the family at the time when educational decisions were being made for those now aged 25 to 29. For those now in high school, family income is much more relevant to the decision whether or not they shall attend college. The education of the husband appears even in the strictly limited expression for the expected level of education, while the education of the wife appears in the second formulation of equation #4. It seems reasonable to infer that the education of the wife would prove to have some independent importance in a study which included a very large number of observations.

The negative sign for X_7, sex of the child, is not surprising. Girls tend to receive somewhat less education than boys.

It is encouraging to find that the attained academic rank of the student (X_9) does have an effect on the level of education which his parents expect for him. In this equation the correlation is between the academic rank of the student as perceived by the parents and the level of education for the child expected by the parents. The negative value of the coefficient is a result of the way in which the scale is constructed. Those at the top of the class were given a score of one; the next, two; and so forth, and, therefore, a negative correlation with expected level of education was expected and was observed.

It is surprising to find a negative effect for X_5, whether or not the family lives in an outlying area, in the expanded expression. This result implies that those who live in cities are less likely to obtain a given level of education than those who live in outlying areas, other factors being constant. This result is directly contrary to the expectations of the investigators, who supposed that the level of education attained by children would tend to be higher in the urban areas than elsewhere. Edcuational institutions are more easily accessible, on the average, to those who live in urban areas than to those who live in rural parts of the country.

The difficulty may lie in the construction of the variable. At first impression it would seem that people who live 50 miles or more from the central business district of a metropolitan area must live in rural areas. However, areas are classified as outlying even if they include cities of 30,000 or 40,000 population. Such localities are far from rural. Another possibility is that the observed negative coefficient for X_5 may be the result of chance fluctuation.

The positive coefficient for X_8, whether or not the child is the eldest, was expected and is consistent with the positive correlation coefficient for the same variable in the analysis of attained level of education. It implies that families tend to give preference to the oldest child in planning for education, or find multiple children in college more difficult to finance. This result, however, is not on particularly firm ground statistically speaking, and the indicated importance of the variable is not large.

The factors which tend to predict the expected level of education for non-whites are shown separately, also in Table 47. Only two variables seem to be important, X_3, the education of the wife, and X_4, the occupation of the head of the family. Both these variables also appear in the expanded equation for the whites, and both have smaller coefficients in that expression than they do for the non-whites. This pattern of higher coefficients for the demographic variables for non-whites than for whites is the same as that which was found in the analysis of the attained level of education. Again, the standard errors of the coefficients for the non-whites tend to be large in relation to the size of the coefficients. This lack of reliability of the results derives from the small number of observations compared to the number of observations for the whites.

The results suggest that the major factors which determine the expectations of non-whites for the education of their children are aspects of the social status of the family within the non-white community. The two aspects which seem to be most important are the education of the wife and the occupation of the husband. Income may be more important than it appears, however. There was a considerable group of "not ascertained" on family income for non-whites. For these individuals the average income of non-whites was assigned. The data do suggest that the socio-economic variables are more important than the parents' view of the academic rank attained by the child in his school work up to the time of interview.

If these findings are correct, they should be of interest to students of the sociology of the negro community in the United States. Given the small size of the sample, however, the results for non-whites in respect to expected level of education as wull as attained level of education must be regarded as preliminary until further research is completed.

Table 51 shows the contribution of each variable to the expected level of education as estimated from Equation #2, while Table 52 shows examples of predictions based on that equation.

In summary, the expected level of education of children now in grades 9 through 12 seems to depend on three types of variables, the socio-economic status of the family, the academic performance of the child, and the sex of the child. The socio-economic status of the family has two dimensions, the financial position of the family as measured primarily by the educational level of the parents.

These variables are broadly similar to those found to be related to the educational attainment of those aged 25 to 29 in 1960. For these individuals also the socio-economic background of the family was important, especially the education of the parents. Family income also seemed relevant, even though income in 1959 was not a good measure of income at the time when the decisions were made. Academic performance was not measured for this group.

The two equations may be considered different approaches to the investigation of the factors which determine the level of education of individual children. If the results are combined, there is evidence of the importance of family income, the education of the parents, the academic performance of the child, the sex of the child, whether this child is the first, and the race of the family. Educational attainment emerges as the result of a complex of social and economic forces rather than the simple consequence of one or two characteristics of the child and his family.

TABLE 51: Contributions of Individual Variable to Estimates of the Expected Level of Education Based on Regression Equation #4

(4A) White

Variable	Contribution of Estimate to Y	Value of Independent Variable
X_1 (family income)	0	under $2000
	.17	$2000 - 2999
	.33	$3000 - 3999
	.50	$4000 - 4999
	.66	$5000 - 5999
	.83	$6000 - 7499
	1.00	$7500 - 9999
	1.16	$10,000 - 14,999
	1.33	$15,000 or over
X_2 (education of head)	.27	grade school
	.53	some high school
	.80	complete high school
	1.33	some college
	1.86	college graduate
X_7 (sex of child)	0	son
	.63	daughter
X_9 (perceived academic rank)	2.18	top of the class
	1.63	above average
	1.09	average
	.54	below average
	0	bottom of the class

(4B) Non-white

Variable	Contribution of Estimate to Y	Value of Independent Variable
X_3 (education of wife)	.42	grade school
	.83	some high school
	1.25	complete high school
	2.08	some college
	2.91	college graduate

Table 51 (continued)

(4B) Non-white (cont.)

Variable	Contribution of Estimate to Y	Value of Independent Variable
X_4 (occupation of head)	3.09	professional, technical, managerial, official
	2.32	clerical, sales personnel
	1.54	craftsman, foreman, members of armed forces
	.77	laborer, farm operator

TABLE 52: Estimates of the Expected Level of Education for Illustrative Valuesof the Independent Variables

(4A) White

	Family Income	Education of Head	Son or Daughter	Academic Rank	Expected Level
Example 1	$4,000	high school	son	above average	some college
Example 2	$8,000	high school	daughter	average	some college
Example 3	$10,000	some college	son	top of class	complete college
Example 4	$10,000	college grad.	daughter	below average	some college
Example 5	$15,000	college grad.	son	above average	complete college

(4B) Non-white

	Education of Wife	Occupation of Head	Expected Level
Example 1	grade school	laborer	complete high school
Example 2	some high school	farmer	complete high school
Example 3	complete high school	foreman	some college
Example 4	some college	clergy	complete college

Appendix A. The Questionnaire

The questions about education asked in the interviews taken in the spring of 1960 appear on the following pages. The actual instrument provided parallel columns which allowed for recording data about several children in the family. Only the column for the first child is reproduced here. The questionnaire used in the fall of 1959 was similar.

EDUCATION

	(Oldest) 1
E1. How many sons and daughters do you have (including grown children)? How old are they?	Sex: Age:
(ASK ABOUT EACH SON OR DAUGHTER AGE 5 OR OVER)	
E2. We'd like to know about the education of each of your children--if he (or she) is in school, how far along is he (or she), or has he (or she) finished school, or what? (IF IN SCHOOL, ENTER WHAT GRADE OR YEAR IN COLLEGE.)	In school, grade: a)________ In college, year: b)________ Finished education? c) /Yes/ /No/ Other: d)________
(IF NOW IN SCHOOL OR COLLEGE) 2a. How do his (or her) marks compare with others in his (or her) class, are they below average, about average, above average, or at the top of the class?	/Below average/ /About average/ /Above average/ /Top of class/
(ASK ABOUT EACH CHILD WHO IS PRE-SCHOOL, OR IN SCHOOL--INCLUDING HIGH SCHOOL)	
E3. How much education do you expect him (or her) to have before he (or she) stops going to school?....	________
(IF NOT CLEAR OR MAY GO TO COLLEGE) 3a. Would you say it's certain he (or she) will go to college, there's a fair chance, or a slight chance?	/Certain to go/ /Fair chance/ /Slight chance/
3b. Do you have in mind a four year college, a junior college, or a vocational school?	/4 year/ /Junior college/ /Vocational/
(ASK ABOUT EACH CHILD NOW IN COLLEGE)	
E4. Where is he (or she) attending college?..........	Name of college: Location:
4a. Is that a city--or state-supported college or a private one?	/City/ /State/ /Private/
4b. Is he (or she) attending college full-time or part-time?	/Full/ /Part/
E5. About how many miles is that from here?...........	________ miles
(IF WITHIN 50 MILES) E6. Does he live at home or at college?	/Home/ /College/
E7. About how much does it cost per year for his education counting tuition, fees, books, room and board, transportation, and everything else?	Total cost: $________
E8. Of that amount, how much comes--(a) from scholarships? (b) from his own earnings? (c) from you as his parents? (d) from other sources. (What sources?)________ ________ ________	a) Scholarships $________ b) Student's earnings $________ c) Parents' contribution $________ d) Other $________

(ASK ABOUT EACH CHILD WHOSE FORMAL EDUCATION IS COMPLETE-See Q.E-2) (Oldest) I

E9. What is he (or she) doing now? (occupation, if working) ____________

(IF IN THE ARMED FORCES)

9a. Does he plan to go back to school? ____________

E10. How many grades of school did he (or she) finish? ____________ grades

10a. What other schooling did he (or she) have? ____________

(IF ATTENDED COLLEGE)

E11. Where did he (or she) go to college?............ Name: Location: ____________

11a. Is that a city--or state--supported college or a private one? / City / / State / / Private / ____________

E12. About how many miles is that from here? ____________ miles

(IF LESS THAN 50 MILES)

12a. Did he live at home or at college? / Home / / College / ____________

E13. About how much did it cost per year for his (or her) college education, counting everything, tuition, fees, books, room and board and other expenses away from home, transportation, and everything else?................. $ ____________

E14. How many years of college did he (or she) complete?.............................. ____________ years

IF LESS THAN FOUR YEARS 14a. Were there any special reasons why he (or she) didn't graduate? (What?)............... ____________ ____________

E15. How long ago did he (or she) leave college?..... (IF ANY CHILD HAS BEEN IN COLLEGE SINCE 1955, SKIP TO Q. E17.) ____________

(IF DID NOT ATTEND COLLEGE)

E16. Did he (or she) consider going to college? ____________

16a. Were there any special reasons why he (or she) didn't go to college? (What were they?)........................ ____________

(REPEAT FOR EACH CHILD WHOSE EDUCATION IS COMPLETE)

(IF ANY CHILDREN ARE NOW IN COLLEGE OR WERE IN COLLEGE SINCE 1955.)
(See Q.E-2 and E-15.)

E17. We're interested in how people manage to raise the money for the college education of their children? How have you people handled this problem?

E18. Have you people made any special efforts to increase your income to help meet the expenses of educating the children?

(IF YES) 18a. What did you do?

E19. Did you have any money set aside before the children entered college which could be used to help pay the cost of going to college?

(IF YES) 19a. Did you have this money in an endowment policy, savings account, savings bonds, or corporate stock or somewhere else? (Which?)

19b. Was this money you had saved out of your income, or was it inherited, or given to you or what?

(IF SAVED) 19c. Had you saved it specially for education?

(IF YES) 19d. How many years before the children went to college did you start setting money aside for their education?

E20. Have you borrowed any money to help pay for the children's education or did they borrow any? (Which?)

E21. Would you say that it has been easy or difficult for your family to meet the cost of educating the children?

21a. What do you have in mind?

E22. Do you feel that the financial help you have given to the education of your children has been as much as they needed or do you wish it could have been more?

(IF THERE ARE ANY CHILDREN NOT YET IN COLLEGE WHO HAVE CHANCE TO ATTEND COLLEGE-SEE Q.E-3-3a)

E23. How do you expect (their) college education will be financed? ___

(IF NOT CLEAR WHETHER MONEY ALREADY SET ASIDE)

23a. Have you set aside any money especially to help pay for (their) college education? ___

(IF YES)

23b. In what form do you have it--an endowment policy, savings bonds, a savings account, corporate stock, or what? ___

23c. Is this money you have saved out of your income, or was it inherited, or given to you, or what? ___

23d. Is this money intended just for the children's education, or may some of it be used for other purposes? ___

E24. Do you think your children will go away to college, or will they live at home, or both? ___

E25. Do you think any of your children will be going to a state-supported, city-supported or private college? ___

E26. Do you expect your children will help pay their own way from part-time or summer jobs before they go to college or while they are in college? ___

(IF YES) 26a. What per cent of the cost of their education would you expect might come from these jobs--would it be nearer 0%, 20%, 40%, 60%, 80%, or 100% ? ___

E27. Do you expect that any other member of the family will take a job to help pay for the children's college education? ___

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Appendix C. Sampling Errors

Properly conducted sample interview surveys yield useful estimates but they do not yield exact values. Errors arise from several sources: sampling, non-response, reporting and processing. Each source of error may be important in evaluating the accuracy of information. The present discussion is limited to sampling errors.

Sample statistics reflect the random variations arising from interviewing only a fraction of the population. The distribution of individuals selected for a sample will usually differ by an unknown amount from that of the population from which the sample is drawn. The value which would have been obtained if the entire population had been designated to be interviewed by the same survey procedures will be referred to as the population value. If different samples were used under the same survey conditions, some of the estimates would be larger than the population value and some would be smaller. The sampling error is a measure of the chance deviation of a sample statistic from the corresponding population value. The sampling error does not measure the actual error of a particular sample estimate; rather, it leads to statements in terms of confidence intervals that are correct in a specified proportion of cases in the long run. Each statement declares that the range of the sampling error on either side of the sample estimate includes the population value.

"Sampling error" as used here is to be interpreted as two standard errors; it is the range, on either side of the sample estimate, chosen frequently in social research in order to obtain the 95 percent "level of confidence". If one requires a greater degree of confidence than this, a wider range than two standard errors should be used. On the other hand, most of the time the actual error of sampling will be less than the sampling error defined above; in about 68 cases of every 100 the population value can be expected to lie within a range of one-half the sampling error (one standard error) of the sample estimates.

Sampling errors themselves are products of the sampling processes and are subject to the effects of random fluctuations. Therefore, a range, rather than a single value, has been used in the tables which follow. The upper limits are based on computations of data from earlier surveys which involved similar sampling methods but different subject matter. They are not averages but values on the high or conservative side. The smaller values were computed by use of the formula for simple random samples which can be viewed as the lower bound to the Survey's sampling errors.

The accompanying tables are appropriate for use where the underlying data are on a "per individual" basis, that is, when the results for each child in a family are presented individually.

APPENDIX TABLE I: Approximate Sampling Errors of Percentages for "Per Individual" Responses
(expressed in percentages)

Reported Percentage	Number of Individuals							
	5500	3000	2000	1000	500	300	200	100
50	1.3 3.2	1.8 4.0	2.2 4.7	3.2 6.2	4.5 8.6	5.8 11.0	7.1 13.4	10.0 18.8
30 or 70	1.2 3.0	1.7 3.6	2.0 4.3	2.9 5.7	4.1 7.9	5.3 10.1	6.5 12.3	9.2 17.2
20 or 80	1.1 2.6	1.5 3.2	1.8 3.7	2.5 5.0	3.6 6.9	4.6 8.8	5.7 10.7	8.0 15.0
10 or 90	0.8 1.9	1.1 2.4	1.3 2.8	1.9 3.7	2.7 5.2	3.5 6.6	4.2 8.1	6.0 11.3
5 or 95	0.6 1.4	0.8 1.7	1.0 2.0	1.4 2.7	1.9 3.7	2.5 4.8	3.1 5.9	4.4 8.2
1 or 99	0.3 0.6	0.4 0.8	0.4 0.9	0.6 1.2	0.9 1.7	1.2 2.1	1.4 2.7	2.0 3.7

APPENDIX TABLE II: Sampling Errors of Differences for "Per Individual" Responses
(expressed in percentages)

Size of Subgroup	Size of Subgroup				
	2000	1000	500	200	100
	For percentages around 35% to 65%				
2000	3.2 - 6.6	3.9 - 7.8	5.0 - 9.8	7.4 - 14.2	10.2 - 19.4
1000		4.5 - 8.9	5.5 -10.6	7.8 - 14.8	10.5 - 19.9
500			6.3 -12.2	8.4 - 15.9	11.0 - 20.7
200				10.0 - 18.9	12.2 - 23.1
100					14.1 - 26.6
	For percentages around 20% and 80%				
2000	2.5 - 5.3	3.1 - 6.2	4.0 - 7.8	5.9 - 11.4	8.2 - 15.5
1000		3.6 - 7.1	4.4 - 8.5	6.2 - 11.8	8.4 - 15.9
500			5.1 - 9.8	6.7 - 12.7	8.8 - 16.6
200				8.0 - 15.1	9.8 - 18.5
100					11.3 - 21.3
	For percentages around 10% and 90%				
2000	1.9 - 4.0	2.3 - 4.7	3.0 - 5.9	4.5 - 8.5	-----------
1000		2.7 - 5.3	3.3 - 6.4	4.7 - 8.9	-----------
500			3.8 - 7.3	5.0 - 9.5	-----------
200				6.0 -11.3	-----------
100					-----------
	For percentages around 5% and 95%				
2000	1.4 - 2.9	1.7 - 3.4	2.2 - 4.3	3.2 - 6.2	-----------
1000		1.9 - 3.9	2.4 - 4.6	3.4 - 6.5	-----------
500			2.8 - 5.3	3.6 - 6.9	-----------
200				4.4 - 8.2	-----------
100					-----------

Many of the tables in this report are on that basis. For tables on a "per family" basis the sampling errors would be smaller. They would tend to be near the lower rather than the upper limit of the ranges shown.

Appendix Table I shows approximate sampling errors of percentages on a per individual basis when individual percentages are considered separately. Appendix Table II shows approximate sampling errors of differences between two percentages. The sampling errors of differences indicate the range in which the "true" differences between the population values of the two compared classes can be expected to fall 95 out of 100 times.